

# Profiles of Foreign Direct Investment in U.S. Energy

1987



**EIA**



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# Profiles of Foreign Direct Investment in U.S. Energy 1987

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Office of Energy Markets and End Use  
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# Preface

In accordance with Section 657, Subpart 8, of the Department of Energy Organization Act, the Energy Information Administration (EIA) prepares an annual report for the Secretary of Energy and for transmittal to Congress. This report summarizes the activities in the United States by foreign-affiliated companies that own or control U.S. energy sources and supplies.

This report presents the following profiles for 1987:

- Foreign direct investment in U.S. petroleum, including natural gas.
- The energy production, processing, distribution, and reserves of foreign-affiliated companies.
- The financial performance and investment activity of foreign-affiliated energy companies.
- Overseas oil and gas operations of U.S. companies.
- Comparisons of foreign-affiliated companies with U.S. energy companies.

The information is intended for use by the Congress, Government agencies, energy industry analysts, international trade and finance analysts, and the public.



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# Executive Summary

*Profiles of Foreign Direct Investment in U.S. Energy 1987* describes the role of foreign ownership in U.S. energy enterprises, with respect to investment, energy operations, and financial performance. Data are utilized from the Energy Information Administration (EIA), U.S. Department of Commerce, company annual reports, and public disclosures of investment transactions.

Of the approximately 80 separate companies profiled, the major foreign-affiliated U.S. companies identified by the EIA are Shell Oil Company, BP America (formerly Standard Oil Company), E. I. du Pont de Nemours and Company, and American Petrofina. Foreign ownership ranges from 23 percent of Du Pont to 100 percent of Shell Oil and BP America.

Highlights of the information in this report are given below:

- Within the energy sector, rising oil consumption and a modest recovery in oil prices in 1987 increased the attractiveness of U.S. petroleum operations to foreign investors. In 1987, macroeconomic factors contributed to a general upswing in total foreign direct investment in the United States. These factors included a fall in the international value of the dollar, continued U.S. economic growth, and growth in the trade surpluses and funds available for investments of major U.S. trading partners.
- Additions to foreign direct investment (FDI)<sup>1</sup> in U.S. petroleum rose from \$0.8 billion to \$6.3 billion. These additions were slightly more than the total growth in additions to FDI for the United States. The change in large part was due to British Petroleum's acquisition of the remaining outstanding shares of Standard Oil Company. For all U.S. industries, total additions to FDI increased from \$35.8 billion in 1986 to \$41.5 billion in 1987.
- Despite the growth in petroleum-related FDI, the petroleum share of foreign ownership in total U.S. industry increased only slightly, from 13.2 percent to 13.5 percent.
- Although coal production attributable to foreign affiliates increased, foreign holdings of U.S. coal assets declined by \$378 million in 1987 due to the disposition of foreign affiliates' coal subsidiaries and properties. The FDI position in U.S. coal contracted from \$3.5 billion in 1986 to \$3.1 billion in 1987.
- In 1987, FDI-related transactions in petroleum followed the trends established in recent years: partial ownership of a major U.S. petroleum company was converted to 100 percent ownership, a variety of oil and gas properties and facilities were acquired by various foreign buyers, drilling ventures with Japanese investors were expanded, and involvement of foreign investors in petroleum refining was increased. The following major transactions took place in 1987:
  - British Petroleum increased its ownership of Standard Oil Company from 55 percent to 100 percent in a transaction valued at \$7.8 billion. Similar transactions effected in 1984 and 1985 gained the Royal Dutch/Shell Group 100 percent ownership of Shell Oil.
  - Major acquisitions of U.S. oil and gas properties and facilities included Total Minatome's purchase of Texas International's producing properties for \$120 million, purchase of some of Union Texas Petroleum's properties by Shell Oil for \$83 million, Wintershall Corporation's acquisition of Mid Louisiana Gas Company from Tenneco for \$80 million, and American Petrofina's purchase of properties from the Exploration Company of Louisiana for \$79 million.

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<sup>1</sup>Foreign direct investment (FDI) is the cumulative net flow of funds between a foreign-affiliated company and its foreign owners. The United States Department of Commerce, the agency that collects data on FDI, measures FDI as the book value of foreign direct investors' equity in and net outstanding loans to their U.S. affiliates. The Department of Commerce defines a U.S. affiliate as a U.S. business enterprise in which one foreign direct investor owns 10 percent or more of the voting securities or the equivalent.

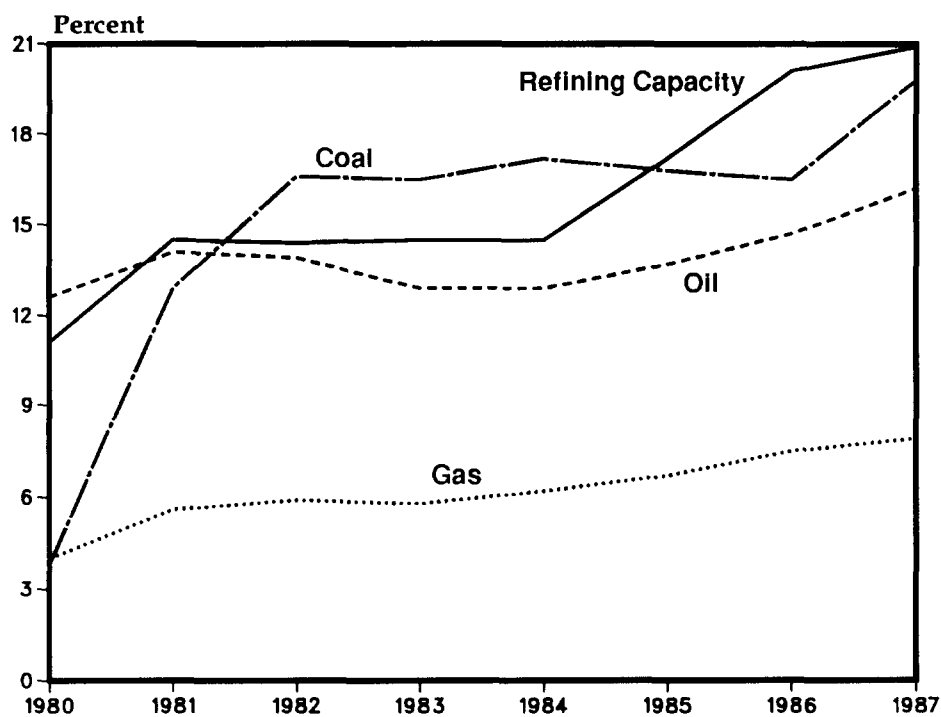
- Nippon Oil Company and Chevron became partners in a joint drilling venture valued at \$100 million. In 1986, a similar venture was formed between Nippon Mining Company and Du Pont's Conoco Unit.
- Transactions involving U.S. refining facilities included Petroleos de Venezuela's (PDVSA's) gain of a 50-percent interest in Champlin Petroleum's Corpus Christi refinery for \$93 million, following a similar transaction in 1986 that gave PDVSA a 50-percent interest in Citgo Petroleum's Lake Charles refinery; First Oil International's purchase of Chevron's Puerto Rican refinery for \$100 million; and Elf Aquitaine's purchase of Riffe Petroleum Company (an asphalt supplier) for \$68 million. In 1987, one refinery changed ownership between foreign affiliates: Total Petroleum (North America) purchased Asamera's Colorado refinery for \$25 million.
- Two large FDI-related transactions involved Newmont Mining Company. Newmont is primarily a gold mining operation, and as a consequence the effects on FDI were classified in mining rather than energy. However, the company has significant oil, gas, and coal production in the United States. In the first transaction, Consolidated Gold Fields increased its ownership share in Newmont to 49.35 percent for \$1.6 billion in fending off an attempted takeover of Newmont. In the second transaction, Newmont increased its stake in Peabody Holding Company, the number one U.S. coal producer, to 49.97 percent for \$320 million.
- Two large transactions involved only foreign affiliates and thus had little effect on FDI. Broken Hill Proprietary acquired AB Volvo's 50.5-percent share of Hamilton Oil for \$394 million, and Great Western Resources acquired Bow Valley Industries' U.S. subsidiary, Bow Valley Resources, for \$141 million.

The financial performance of energy companies improved with the recovery in oil prices. Foreign-affiliated energy companies' return on equity rose from negative 1.6 percent in 1986 to 10.6 percent in 1987. Other energy companies overall showed less improvement in their return on equity, from 2.6 percent to 4.3 percent, in part due to Texaco's \$4.9-billion charge against net income related to litigation and restructuring. Excluding Texaco, the return on equity for other energy companies was 7.9 percent in 1987. Although income and cash flow, as well as the prospects for energy prices, improved in 1987, cutbacks in exploration and development spending effected in 1986 carried over to the first half of 1987. The foreign affiliates' 1987 capital expenditures fell by 2 percent from the prior year to \$8.4 billion, and other energy companies reduced their expenditures by 6 percent to \$26.8 billion.

In 1987, the role of foreign affiliates in U.S. energy operations continued to increase in all areas (Figure ES1):

- The foreign-affiliated companies' share of U.S. crude oil distillation capacity grew from 20 percent in 1986 to 21 percent in 1987, due primarily to PDVSA's acquisition of a 50-percent interest in the Champlin Petroleum refinery. As recently as 1984, the foreign affiliates' share of refining capacity was less than 15 percent.
- Foreign affiliates' shares of U.S. oil and gas production have steadily increased since 1984, reaching 16 percent and 8 percent, respectively, in 1987. The growth of foreign affiliates' U.S. oil production in 1987 was largely the result of the consolidation of Standard Oil Company with BP North America to form BP America, together with increased Alaskan production by that company. In natural gas production, the bulk of the increase is traceable to the Wintershall acquisition noted above.
- Even while the value of U.S. coal assets held by foreign interests declined, foreign affiliates' share of U.S. coal production rose to nearly 20 percent. This resulted from the addition of Newmont Mining Company's share of Peabody Holding Company's production to the foreign affiliates' total in 1987.
- The importance of foreign affiliates in U.S. uranium operations continued to rise. In 1987, foreign affiliates' expenditures for uranium exploration and development were level, but expenditures of U.S.-based companies declined. The foreign affiliates' share of exploration and development expenditures was 54 percent in 1986 and 61 percent in 1987.

**Figure ES1. Foreign Affiliates' Share of U.S. Production of Oil, Gas, and Coal, and U.S. Refining Capacity, 1980-1987**



Source: Chapter 3 and previous editions of this report.





# 1. Introduction

According to a Congressional report on foreign investment:<sup>2</sup>

"The Congress and the public have expressed serious concerns about the impact and effects of foreign investment in the United States. They are concerned about the possibility that, if the assets or the natural resources of large U.S. firms end up under foreign control, those firms could be operated in ways ultimately harmful to U.S. national interests. These concerns arise out of the reports of foreign takeovers of high technology U.S. firms, acquisitions of U.S. farmland, investment in U.S. banks and government securities, and large foreign purchases of U.S. energy and other natural resources with the concomitant export of these scarce resources. Some of these concerns may be unfounded, but it is self-evident that both the Congress and the public must be fully apprised of the impact and effects of foreign investment to make these judgments."

The above concerns extend specifically to involvement of foreign interests in U.S. energy as evidenced by Section 657, Subpart 8, of the Department of Energy Organization Act (Public Law 95-91). This act requires, *inter alia*, that the Secretary of Energy report to the President for transmittal to Congress:

"...to the extent practicable, a summary of activities in the United States by companies or persons which are foreign owned or controlled and which own or control United States energy sources and supplies, including the magnitude of annual foreign direct investment in the energy sector in the United States..."

The Energy Information Administration (EIA) annually prepares a report pursuant to the legislative requirement. Versions of the report, for years prior to the 1983 reporting year, have appeared as Appendix A in the U.S. Department of Energy's *Secretary's Annual Report to Congress*. Beginning with the 1983 reporting year, the annual report on foreign investment and ownership in U.S. energy has been published by the EIA. This makes the information contained in it available on as timely a basis as possible.

By definition of the U.S. Department of Commerce,<sup>3</sup> "a U.S. affiliate is a U.S. business enterprise in which a single foreign direct investor owns at least 10 percent of the voting securities, or the equivalent." It should be noted that holding 10 percent or more of a company's voting stock does not necessarily constitute control of that company. The determination of control is a complex and often subjective process in which many factors other than the percentage of ownership must be considered.

This report reviews the patterns of foreign ownership interest in U.S. energy enterprises, exclusive of portfolio investment. Throughout this report such foreign nonportfolio ownership interests in U.S. energy companies are referred to as "foreign direct investment" (FDI), and the U.S. affiliates in which a foreign entity holds an ownership interest are referred to as "foreign-affiliated" U.S. enterprises or companies.

This report profiles the involvement of foreign-affiliated U.S. companies in the following areas: domestic petroleum production, reserve holdings, refining and marketing activities, coal production, and uranium exploration and development. A financial profile of U.S. energy companies that are foreign-affiliated is presented, comparing 1987 with 1986. For the petroleum industry, the report includes the international composition of ownership, as well as information on the flow of capital and income between the foreign owners and the foreign-affiliated companies. In addition, recent acquisitions of ownership interests in U.S. energy companies by foreign persons are summarized.

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<sup>2</sup>U.S. House of Representatives, Committee on Government Operations, *The Adequacy of the Federal Response to Foreign Investment in the United States* (August 1980), p. 2.

<sup>3</sup>U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, June 1988). Also, it should be noted that consistent with its definition, FDI activities portrayed throughout this report do not include any foreign investment activities in connection with less than 10 percent ownership, which is known as portfolio investment.



## 2. Foreign Direct Investment in U.S. Petroleum and Coal

The information on foreign direct investment (FDI) in the United States is derived from data published by the U.S. Department of Commerce. The data are obtained from quarterly reports required of foreign-affiliated U.S. enterprises. FDI is the cumulative net flow of funds between a foreign-affiliated company and its foreign owners. These capital flows consist of stock purchases and paid-in capital, retained earnings and other equity, and loans from and to the foreign parents.<sup>4</sup> The change in FDI is not a measure of capital expenditures in the United States by foreign-affiliated U.S. companies. Foreign direct investment is a measure of the net flow of capital between the foreign entities and their U.S. affiliates, emphasized that investment flows out of, as well as into, the United States. As is discussed in the next section, U.S. direct investment abroad generally exceeds FDI in the United States, although the difference has been declining in recent years.

For U.S. Department of Commerce reporting purposes, petroleum consists of crude oil production (including natural gas liquids), natural gas production, oilfield services, integrated refining, marketing, and petroleum transport. Due to the prominence of the major petroleum companies, foreign-affiliated companies classified in integrated petroleum refining accounted for 87 percent of the FDI in U.S. petroleum in 1987. The major foreign-affiliated U.S. petroleum companies identified by the Energy Information Administration (EIA) are Shell Oil Company, BP America (formerly Standard Oil Company and BP North America), E.I du Pont de Nemours and Company, and American Petrofina. Foreign ownership ranges from 23 percent of Du Pont to 100 percent of BP America and Shell Oil.

The role of foreign-affiliated companies in petroleum and other U.S. energy operations, based on EIA and other data sources, is discussed in Chapter 3.

### *Foreign Direct Investment and Rates of Return in U.S. Petroleum*

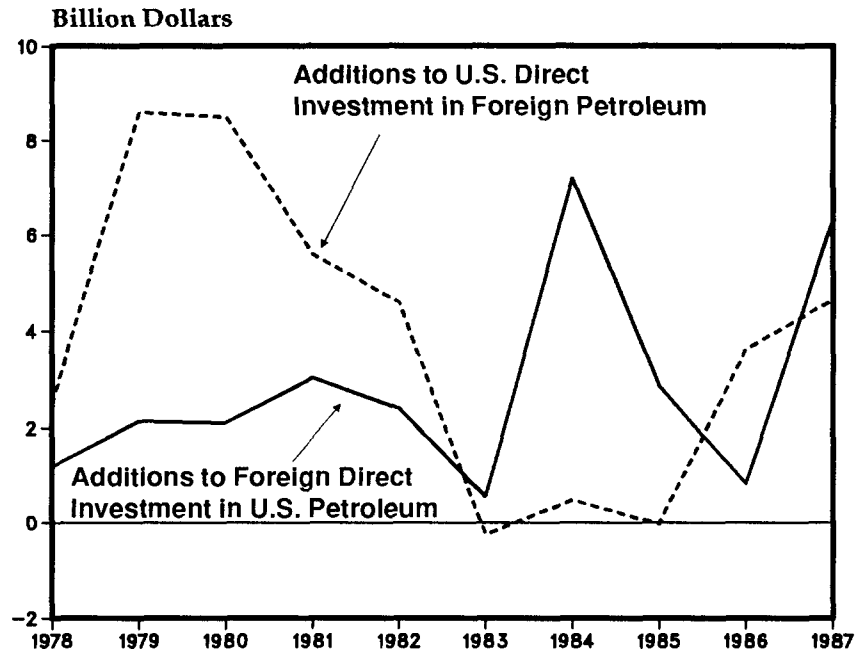
The value of FDI in U.S. petroleum increased by \$6.3 billion in 1987, exceeded only by the \$7.2 billion in additions to petroleum FDI registered in 1984 (Figure 1). The petroleum share of total FDI in the United States, however, was only 13.5 percent in 1987, below the peak of 15.4 percent experienced in 1984. While high levels of FDI in U.S. petroleum have been sustained in recent years, FDI in other lines of activity has grown in relative importance (Table 1). The high level of additions to petroleum FDI in 1987 primarily was due to British Petroleum's purchase of all outstanding shares of Standard Oil Company, subsequently renamed BP America. Prior to this acquisition, British Petroleum had a 55-percent ownership share of Standard Oil. The new company included the assets and operations of BP North America as well. British Petroleum's purchase of the 45-percent minority interest in Standard Oil was valued at \$7.8 billion. The aggregate purchase price approximated the fair market value of the net assets acquired and was \$4.7 billion more than the minority interest's book value. Excluding British Petroleum's investment, additions to FDI in U.S. petroleum were \$1.6 billion, about double the level of the previous year, indicating a heightened interest in U.S. petroleum on the part of foreign investors in both upstream and downstream lines of business. The modest recovery in oil prices in 1987, from less than \$10 per barrel at the wellhead in mid-1986 to the \$15 range in the last quarter of 1987, raised the expected profitability of oil and gas production activity. Continued U.S. economic growth was a stimulus not only to expansion of production capacity, but also to increased energy consumption, improving profit prospects for refined product manufacture. Macroeconomic factors contributed to the upswing in foreign direct investment as well. The continued fall in the international value of the dollar tended to lower the cost to foreign interests of acquiring U.S. assets. Growth in the dollar-based trade surpluses of major U.S. trading partners, stemming from the deterioration in the U.S. trade balance, increased the funds available for investment in the United States.

On average, in 1987, the composition of FDI-related transactions in petroleum was similar to the patterns evident in recent years. British Petroleum Company's (BP's) purchase of the 45 percent of Standard Oil's common shares that BP did not previously own paralleled earlier actions by the Royal Dutch/Shell Group relative to Shell

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<sup>4</sup>One of the components of FDI consists of equity and intercompany account capital flows between a foreign investor and its U.S. affiliate measured on a net basis. Since this component is measured on a net basis, it can have a negative value.

**Figure 1. Additions to Foreign Direct Investment in U.S. Petroleum and U.S. Direct Investment in Foreign Petroleum, 1978-1987**



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1985, August 1987, and August 1988).

**Table 1. Foreign Direct Investment in U.S. Petroleum and U.S. Direct Investment in Foreign Petroleum, 1980-1987**

| Year | Foreign Direct Investment in U.S. Petroleum <sup>a b</sup> | Total Foreign Direct Investment in U.S. <sup>b</sup> | Petroleum As Percent of Total | U.S. Direct Investment in Foreign Petroleum <sup>a c</sup> | U.S. Direct Investment Abroad <sup>c</sup> | Petroleum As Percent of Total |
|------|--|--|-------------------------------|--|--|-------------------------------|
|      | (billion dollars)  |  |                               | (billion dollars)  |  |                               |
| 1980 | 12.2   | 83.0   | 14.7                          | 47.6   | 215.4                                      | 22.1                          |
| 1981 | 15.2   | 108.7  | 14.0                          | 53.2   | 228.3                                      | 23.3                          |
| 1982 | 17.7   | 124.7  | 14.2                          | 57.8   | 207.8                                      | 27.8                          |
| 1983 | 18.2   | 137.1  | 13.3                          | 57.6   | 207.2                                      | 27.8                          |
| 1984 | 25.4   | 164.6  | 15.4                          | 58.1   | 211.5                                      | 27.5                          |
| 1985 | 28.3   | 184.6  | 15.3                          | 57.7   | 230.2                                      | 25.1                          |
| 1986 | 29.1   | 220.4  | 13.2                          | 61.7   | 259.6                                      | 23.8                          |
| 1987 | 35.4   | 261.9  | 13.5                          | 66.4   | 308.8                                      | 21.5                          |

<sup>a</sup>The petroleum industry includes all phases of petroleum exploration, production, refining, transport, and marketing.

<sup>b</sup>Foreign direct investment (FDI) is the value of foreign parents' net equity in, and outstanding loans to, U.S. affiliates at the end of the year.

<sup>c</sup>The value of U.S. parents' net equity in, and loans to, foreign affiliates.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1988).



Oil. BP's total purchase price was \$7.8 billion, making it the largest FDI-related transaction in history. The Royal Dutch/Shell Group spent \$5.7 billion in 1984 and 1985 to gain 100-percent ownership of Shell Oil.

In U.S. oil and gas production, major FDI-related transactions included:

- Total Minatome purchased producing properties from Texas International for \$120 million.
- Shell Oil purchased oil and gas properties from Union Texas Petroleum for \$83 million.
- Wintershall Corporation acquired Mid Louisiana Gas Company from Tenneco for \$80 million.
- American Petrofina purchased producing properties from the Exploration Company of Louisiana for \$79 million.
- Nippon Oil Company and Chevron became partners in a joint drilling venture valued at \$100 million. In 1986, a similar venture was formed between Nippon Mining Company and Du Pont's Conoco unit.
- Two large transactions involved only foreign affiliates and consequently had little effect on the level of FDI in petroleum: Broken Hill Proprietary acquired AB Volvo's 50.5-percent share of Hamilton Oil for \$394 million, and Great Western Resources acquired Bow Valley Industries' U.S. subsidiary, Bow Valley Resources, for \$141 million.

Foreign interests continued to become more prominent in U.S. petroleum refining in 1987. Major FDI-related refinery transactions included:

- Petroleos de Venezuela (PDVSA) and Union Pacific became joint venture partners in Champlin Petroleum's Corpus Christi refinery in a transaction valued at \$93 million. In a similar transaction in 1986, PDVSA gained a 50-percent interest in Citgo Petroleum's Lake Charles, Louisiana, refinery. Both transactions involved crude oil supply commitments from PDVSA. It should be noted that a joint venture between Texaco and Saudi Arabian interests involving three of Texaco's U.S. refineries (615,000 barrels per day capacity) was announced in 1988.
- First Oil International acquired Chevron's Caribbean Gulf Refining Corporation and its refinery (36,000 barrels per day capacity) in San Juan, Puerto Rico, for \$100 million.
- Elf Aquitaine purchased Riffe Petroleum Company (an asphalt supplier) for \$68 million.
- In a transaction between two foreign-affiliated companies, Total Petroleum (North America) purchased Asamera's Colorado refinery (33,500 barrels per day capacity) for \$25 million.

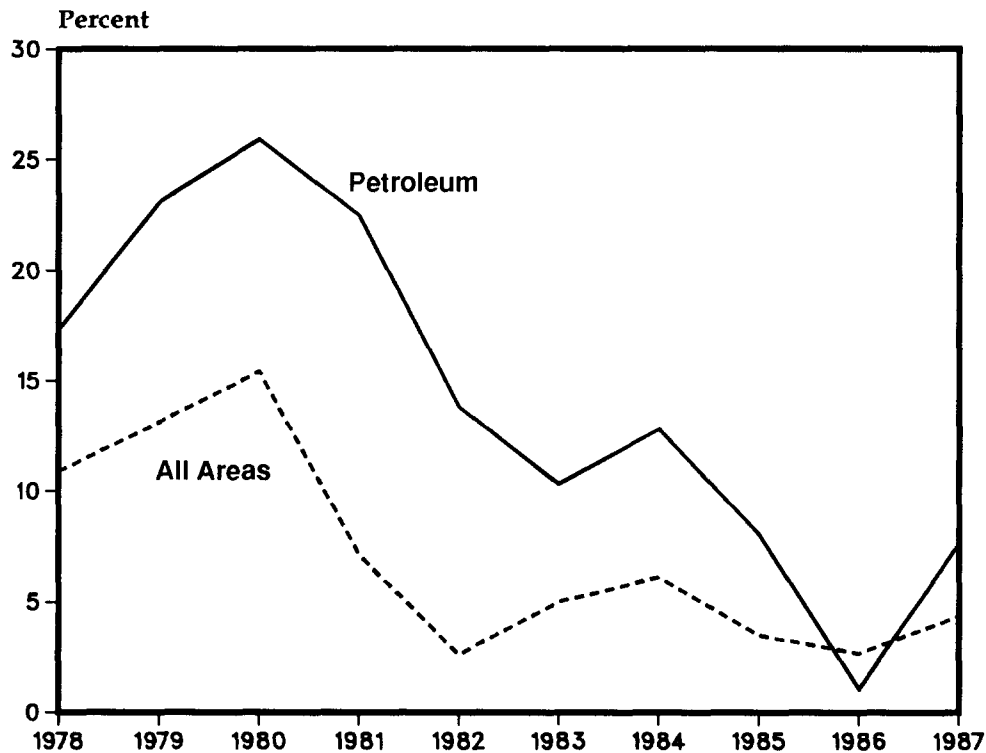
With respect to petroleum investment abroad, additions to U.S. direct investment in foreign petroleum grew from the previous year's level, totaling \$4.7 billion in 1987 (Figure 1). Much of the increase appears to be traceable to Exxon, which for \$1.2 billion acquired the assets of Sulpetro Ltd. in Western Canada and Delhi Petroleum Proprietary Ltd. in Australia. Also contributing to direct investment in foreign petroleum was Atlantic Richfield's purchase of 24 percent of Britoil's ordinary shares with a value of \$758 million. In 1988, Atlantic Richfield sold its stake in Britoil but subsequently gained a controlling interest in Tricentrol. The increase in additions to direct investment in foreign petroleum was consistent with the expenditure patterns reported by U.S.-based major energy companies. Preliminary data for the 22 major energy companies that report to EIA's Financial Reporting System (FRS)<sup>5</sup> indicate that these companies increased their capital and exploratory expenditures for foreign petroleum operations by 21 percent from the prior year to \$11.7 billion. Most of the increase in expenditures was for proved acreage acquisition and development, reflecting the modest recovery in oil prices from the low of 1986.

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<sup>5</sup>See Energy Information Administration, *Performance Profiles of Major Energy Producers 1986*, DOE/EIA-0206(86) (Washington, DC, January 1988), for detailed financial and operating information concerning the FRS companies.

Improvement in oil prices led to an upturn in the profitability of U.S. petroleum operations for foreign direct investors (Figure 2). The 7.6-percent rate of return for petroleum FDI in 1987, though recovering to near the level of 1985, was well below the rate of return in earlier years. This recovery in the petroleum rate of return was sufficient to place it above the rate of return for overall FDI, which was 4.4 percent in 1987; the return on FDI excluding petroleum was only 3.8 percent.<sup>6</sup>

**Figure 2. Rate of Return on Foreign Direct Investment in the United States, 1978-1987<sup>a</sup>**



<sup>a</sup>This rate of return is defined as annual income from foreign direct investment accruing to foreign parents divided by the average of the FDI position of foreign parents at the beginning and end of the year.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, (Washington, DC, August 1982, August 1987, and August 1988).

<sup>6</sup>The rate of return is defined as the foreign investors' income from foreign-affiliated U.S. companies divided by the average of the beginning-of-year and end-of-year balances of the parents' foreign direct investment position. The foreign investors' income from the foreign-affiliated U.S. company is calculated by including its share in net income (after U.S. income taxes) plus net interest paid to the parents' intercompany accounts, less withholding taxes on dividends and interest. This rate of return is not directly comparable to rates of return computed from corporate financial data. An analysis of rates of return based on financial data is provided in Chapter 4.

## Sources of Foreign Direct Investment in U.S. Petroleum

FDI in U.S. petroleum continued to be dominated by European interests. Largely due to British Petroleum's gain of 100-percent ownership of Standard Oil, the share of FDI in U.S. petroleum traceable to European interests reached nearly 93 percent in 1987 (Table 2), the highest share since at least 1976. While the magnitude of FDI in U.S. petroleum originating from oil companies in the United Kingdom and the Netherlands is no longer disclosed by the U.S. Department of Commerce, these countries have accounted for the vast majority of such investment in past years. Petroleum FDI attributed to investors based in Latin America and Other regions declined in 1987 (Figure 3), accounting for just 3.2 percent of the total. The Canadian share continued to decline in 1987, to 4.0 percent, though the value held steady at around \$1.4 billion. Deregulation of the Canadian energy industry in recent years and government policies encouraging indigenous investment in the earlier years of this decade contributed to the steady decline in the Canadian share of FDI in U.S. petroleum, from 15 percent in 1980 to 4 percent in 1987.

**Table 2. Geographic Sources of Foreign Direct Investment in U.S. Petroleum, 1983-1987**

| Source                               | 1983              | 1984   | 1985   | 1986   | 1987   | 1983               | 1984  | 1985  | 1986  | 1987  |
|--------------------------------------|-------------------|--------|--------|--------|--------|--------------------|-------|-------|-------|-------|
|                                      | (million dollars) |        |        |        |        | (percent of total) |       |       |       |       |
| All Countries . . . . .              | 18,209            | 25,400 | 28,270 | 29,094 | 35,395 | 100.0              | 100.0 | 100.0 | 100.0 | 100.0 |
| Canada . . . . .                     | 1,391             | 1,544  | 1,589  | 1,432  | 1,433  | 7.6                | 6.1   | 5.6   | 4.9   | 4.0   |
| Europe <sup>a</sup> . . . . .        | 16,326            | 23,142 | 25,636 | 26,139 | 32,787 | 89.7               | 91.1  | 90.7  | 89.8  | 92.6  |
| Netherlands . . . . .                | 8,646             | 9,981  | 11,481 | (b)    | (b)    | 47.5               | 39.3  | 40.6  | (b)   | (b)   |
| United Kingdom . . . . .             | 5,955             | 10,991 | 12,155 | 11,758 | (b)    | 32.7               | 43.3  | 43.0  | 40.4  | (b)   |
| Japan . . . . .                      | -408              | -88    | 31     | -34    | 30     | -2.2               | -0.3  | 0.1   | -0.1  | 0.1   |
| Latin America <sup>c</sup> . . . . . | 829               | 656    | 577    | 889    | 687    | 4.6                | 2.6   | 2.0   | 3.1   | 1.9   |
| Other . . . . .                      | 71                | 146    | 437    | 668    | 458    | 0.4                | 0.6   | 1.5   | 2.3   | 1.3   |
| Memorandum:                          |                   |        |        |        |        |                    |       |       |       |       |
| OPEC <sup>d</sup> . . . . .          | 10                | 12     | 17     | (b)    | (b)    | 0.1                | (e)   | 0.1   | (b)   | (b)   |

<sup>a</sup>Europe consists of Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Sweden, Switzerland, and the United Kingdom.

<sup>b</sup>Data withheld by U.S. Department of Commerce to prevent disclosure.

<sup>c</sup>Latin America consists of Western Hemisphere nations excluding the United States, Puerto Rico, the U.S. Virgin Islands, and Canada.

<sup>d</sup>The OPEC countries are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, Venezuela, and United Arab Emirates.

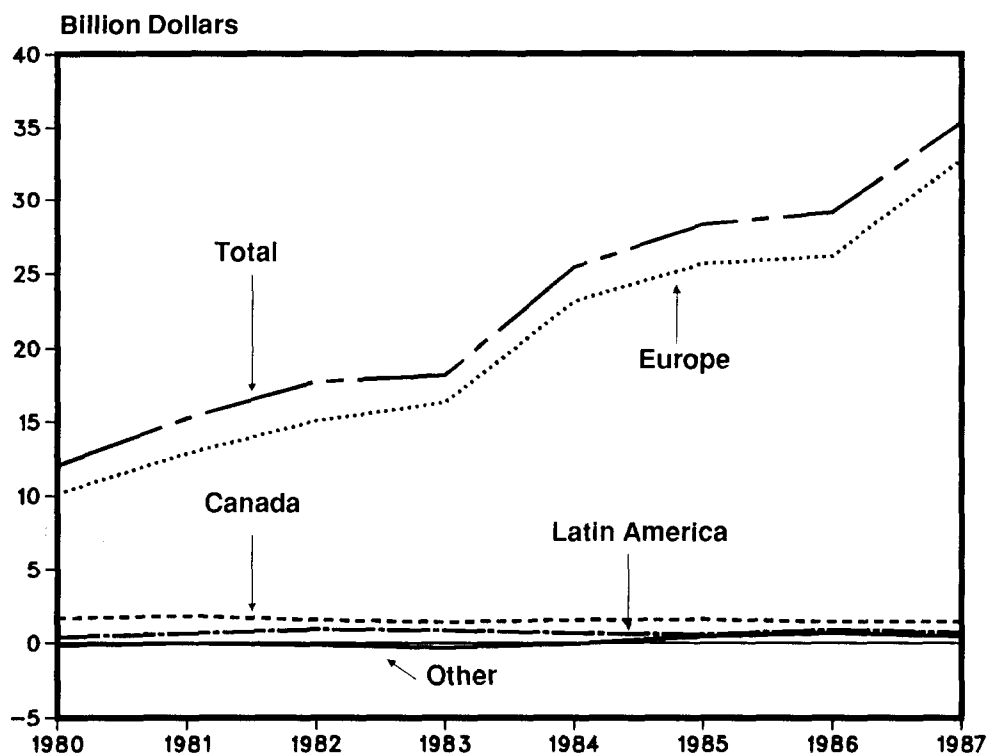
<sup>e</sup>Less than 0.05 percent.

Note: Total may not equal sum of components due to independent rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1988).

FDI in U.S. petroleum originating from member countries of the Organization of Petroleum Exporting Countries (OPEC) is also no longer disclosed by the U.S. Department of Commerce (Table 3). OPEC's share of FDI in U.S. petroleum undoubtedly increased following three recent transactions: the 1986 purchase of a 50-percent share in Citgo Petroleum by PDVSA for \$290 million; the \$330 million common stock transaction in 1986 between Panhandle Eastern and Sonatrach, the Algerian national oil and gas company; and PDVSA's 50-percent joint venture involving Champlin Petroleum's Gulf Coast downstream assets for \$93 million in 1987. Also, Kuwait Petroleum Corporation's investment in Santa Fe International, acquired in 1981 for approximately \$2.5 billion, is classified under the category of "Other" by the U.S. Department of Commerce, even though Santa Fe International is a significant oil and gas producer. If the investment in Santa Fe International was classified as FDI in petroleum, then Kuwait would rank about third among countries with FDI in U.S. petroleum.

**Figure 3. Sources of Foreign Direct Investment in U.S. Petroleum  
by Geographic Area, 1980-1987**



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1988).

**Table 3. OPEC Direct Investment in the United States, 1981-1987  
(Million Dollars)**

| Investment Area           | 1981         | 1982         | 1983         | 1984         | 1985         | 1986         | 1987         |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Petroleum . . . . .       | (a)          | 6            | 10           | 12           | 17           | (a)          | (a)          |
| Manufacturing . . . . .   | 49           | 31           | -22          | -21          | -11          | 84           | 164          |
| Wholesale Trade . . . . . | (a)          | (a)          | 139          | 167          | 137          | 149          | 146          |
| Banking . . . . .         | 122          | 202          | 205          | 268          | 345          | 332          | 365          |
| Real Estate . . . . .     | 376          | 555          | 614          | 707          | 726          | 933          | 833          |
| Other . . . . .           | 2,650        | (a)          | 3,093        | 3,759        | 3,393        | (a)          | (a)          |
| <b>Total . . . . .</b>    | <b>3,336</b> | <b>4,045</b> | <b>4,039</b> | <b>4,892</b> | <b>4,607</b> | <b>4,787</b> | <b>4,981</b> |

<sup>a</sup>Data withheld by the U.S. Department of Commerce to prevent disclosure.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1988).

Additions to FDI are composed of reinvestment of earnings and capital flows. For the fifth time in the past 6 years, net capital flows<sup>7</sup> from foreign investors to their U.S. petroleum affiliates exceeded reinvested earnings as a source of additions to FDI in U.S. petroleum. Reinvested earnings, however, increased by \$2.5 billion in 1987, though they accounted for only 22 percent of the additions to FDI in U.S. petroleum for the year (Table 4). Reinvested earnings rose in response to the partial recovery in oil prices in 1987, and thus in company cash flow and earnings. More than three fourths of total earnings were reinvested, as dividends distributed to foreign investors fell to their lowest level since at least 1981 (Table 5).

**Table 4. Additions to Foreign Direct Investment in U.S. Petroleum, 1977-1987**  
(Million Dollars)

| Year | Total Additions | Equity and Intercompany Account Capital Flows | Reinvested Earnings of Incorporated Affiliates | Valuation Adjustments |
|------|-----------------|---|--|-----------------------|
| 1977 | 653             | 52  | 601  | 0                     |
| 1978 | 1,189           | 303   | 940  | -54                   |
| 1979 | 2,144           | 499   | 1,645  | 0                     |
| 1980 | 2,294           | -59   | 2,161  | 192                   |
| 1981 | 3,046           | 919   | 2,246  | -119                  |
| 1982 | 2,414           | 1,409   | 1,002  | 3                     |
| 1983 | 549             | -57   | 565  | 40                    |
| 1984 | 7,191           | 5,581   | 1,628  | -19                   |
| 1985 | 2,870           | 2,581   | 565  | -276                  |
| 1986 | 824             | 1,776   | -1,114   | 162                   |
| 1987 | 6,301           | 5,032   | 1,378  | -108                  |

Note: Components may not sum to total due to independent rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1982, October 1984, August 1986, August 1987, and August 1988). U.S. Department of Commerce, Bureau of Economic Analysis, *Selected Data on Foreign Direct Investment in the United States, 1950-79* (Washington, DC, December 1984).

**Table 5. Distributed and Reinvested Earnings for Foreign Direct Investment in U.S. Petroleum, 1981-1987**  
(Million Dollars)

| Year | Earnings | Distributed | Reinvested |
|------|----------|-------------|------------|
| 1981 | 3,118    | 872         | 2,246      |
| 1982 | 2,241    | 1,239       | 1,002      |
| 1983 | 1,593    | 1,028       | 565        |
| 1984 | 2,402    | 774         | 1,628      |
| 1985 | 1,668    | 1,103       | 565        |
| 1986 | -209     | 904         | -1,114     |
| 1987 | 1,774    | 396         | 1,378      |

Source: 1986 and 1987: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1988). 1985: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1987). 1984: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1986). All 1983 data and reinvested earnings for 1981 and 1982: *Survey of Current Business* (Washington, DC, August 1985). Earnings for 1981 and 1982: *Survey of Current Business* (Washington, DC, October 1984); distributed earnings for 1981 and 1982 were computed as the difference between earnings and reinvested earnings.

<sup>7</sup>Equity and intercompany account capital flows measure the investment and lending from the foreign investor to its U.S. affiliate on a net basis. Since this measure is on a net basis, it can be negative if, as occurred in 1980 and 1983, repayments by a U.S. affiliate to its foreign parent exceed the investment by the parent in the affiliate. Reinvested earnings are earnings of the U.S. affiliate due the foreign investor less dividends declared.



## Foreign Direct Investment and Rates of Return in U.S. Coal

U.S. coal production remained an area of increased foreign investor interest in 1987. The foreign-affiliated coal producers' share of U.S. bituminous coal and lignite production rose to an all-time high in 1987 of 19.8 percent (see Chapter 3). This increase stemmed from acquisitions by Consolidation Coal Company (a unit of Du Pont) in 1986 and from Peabody Holding Company's entry into the data base in 1987. The latter development resulted from Newmont Mining increasing its ownership in Peabody to 49.97 percent in 1987.<sup>8</sup>

Despite the increase in U.S. coal production attributable to foreign affiliates, the value of dispositions of foreign investor interests in U.S. coal operations exceeded the additions to these interests in 1987. Additions to FDI in U.S. coal were a negative \$378 million in 1987, down substantially from \$609 million in 1986 (Table 6). The rate of return on FDI in U.S. coal, however, was positive for the first time since 1981, though it was under 1.0 percent. The major FDI-related transaction in coal operations was the breakup of the joint venture between Shell Oil Company and Fluor Corporation, thereby splitting up the operations of A. T. Massey Coal Company.

**Table 6. Foreign Direct Investment, Additions to Foreign Direct Investment, and Rate of Return on Foreign Direct Investment in U.S. Coal, 1980-1987**

| Investment and<br>Rate of Return                | 1980 | 1981  | 1982  | 1983  | 1984  | 1985  | 1986  | 1987  |
|---|------|-------|-------|-------|-------|-------|-------|-------|
| (million dollars)                               |      |       |       |       |       |       |       |       |
| FDI in U.S. Coal . . . . .                      | 478  | 1,135 | 1,208 | 1,281 | 2,637 | 2,871 | 3,480 | 3,102 |
| Additions to FDI<br>in U.S. Coal . . . . .      | NA   | 657   | 73    | 73    | 1,356 | 234   | 609   | -378  |
| (percent)                                       |      |       |       |       |       |       |       |       |
| Rate of Return on FDI<br>in U.S. Coal . . . . . | NA   | 1.9   | -3.0  | (a)   | -7.0  | -12.0 | -7.1  | 0.5   |

<sup>a</sup>Less than 0.05 percent.

NA = Not available.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC, August 1988).

<sup>8</sup>Prior to 1987, the ownership share of Peabody Holding Company traceable to the foreign ownership interest in Newmont Mining (Consolidated Gold Fields) was less than 10 percent. However, in 1987, Consolidated Gold Fields' increased ownership of Newmont Mining together with Newmont Mining's increased ownership of Peabody raised the foreign ownership share of Peabody above the 10-percent threshold.

### 3. The Role of Foreign-Affiliated Companies in U.S. Energy Operations

#### *Oil and Gas Reserves and Production*

Crude oil and natural gas liquids (NGL) reserves of foreign-affiliated companies grew an impressive 13 percent in 1987, to 6.3 billion barrels.<sup>9</sup> The major source of increase in foreign affiliates' reserves is attributable to the acquisition by British Petroleum of 100-percent ownership of Standard Oil in 1987. This transaction, which combined Standard Oil's operations with those of BP North America to form BP America, added over 400 million barrels to the total U.S. oil reserves reported for foreign affiliates. Also contributing to the growth in the foreign affiliates' U.S. oil reserves were large upward revisions in 1987 (390 million barrels for BP America and 146 million barrels for Shell Oil) and reserve purchases by Shell of 106 million barrels. The total foreign-affiliated share of U.S. proved oil reserves equaled 17.8 percent at the end of 1987, compared with 15.9 percent at the end of 1986 (Table 7).

Natural gas reserves were a somewhat different story. Proved reserves of the foreign affiliates were down slightly in 1987, at 18.1 trillion cubic feet. A large increase in the holdings of BP America was largely offset by a fall in Shell's gas reserves, and by the sales of Britoil U.S. Holdings to American Exploration, and Universal Resources to Questar, respectively. However, although the foreign affiliates' ownership of U.S. natural gas reserves fell 0.5 percent, overall U.S. natural gas reserves declined even more (2 percent) in 1987. As a result, the foreign affiliates' share of U.S. natural gas reserves rose from 9.5 percent in 1986 to 9.7 percent in 1987.

In aggregate, the foreign oil reserve holdings of major U.S. energy companies are twice as great as those held by foreign affiliates in the United States. The total crude oil and NGL reserve interest of the 22 major energy companies reporting to EIA's Financial Reporting System (FRS) in 1986 was 13.2 billion barrels (Table 8).<sup>10</sup> These reserves accounted for 2.2 percent of the total free-world holdings outside of the United States, slightly down from the 2.4-percent share in 1985.<sup>11</sup> In 1986, foreign oil reserves of the U.S. companies fell by 10 percent. Over 90 percent of the decline in foreign oil reserves was attributable to the removal of Libyan reserves from the companies' books following the Presidential Executive Order that required U.S. companies to terminate commercial activity in Libya.

Crude oil and NGL production of foreign affiliates in the United States rose by 7 percent in 1987. In contrast, for the second consecutive year, total U.S. production fell. Foreign-affiliated U.S. production totaled 1.6 million barrels a day (Table 9). The production gain was largely traceable to BP America, now the largest U.S. oil producer, which increased its crude oil and NGL production by 17.5 percent in 1987. Natural gas production of foreign-affiliated companies grew at a 7-percent rate in 1987, to 1.3 trillion cubic feet. These companies' share of total U.S. gas production increased to 7.9 percent. The largest increases in gas production were registered by Winterhall, which acquired Mid Louisiana Gas Company from Tenneco in 1987, followed by BP America.

Many other foreign oil and gas companies, in contrast, have disinvested in U.S. production activity. Several Canadian companies, for example, have disposed of U.S. petroleum assets in recent years in response to more favorable conditions in Canada. These companies have included Husky Oil, Bow Valley Industries, Asamera, Campbell Resources, and Scurry Rainbow Oil.

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<sup>9</sup> Reserves and production data are reported in this section on a net ownership basis and were compiled from company annual reports to shareholders and from Securities and Exchange Commission Form 10-K.

<sup>10</sup> Energy Information Administration, *Performance Profiles of Major Energy Producers 1986*, DOE/EIA-0206(86) (Washington DC, January 1988).

<sup>11</sup> British Petroleum Company, *BP Statistical Review of World Energy* (London, June 1987).

**Table 7. Domestic Oil and Dry Natural Gas Proved Reserves and Production for Foreign-Affiliated U.S. Companies, 1986 and 1987**

| Fuel Type   | Foreign-Affiliated Companies <sup>a</sup> | U.S. Total | Foreign-Affiliated Share of U.S. Total<br>(percent) |
|---|---|------------|---|
| <b>Crude Oil and Natural Gas Liquids <sup>b</sup></b>         |   |            |   |
| <b>Proved Reserves</b>  |   |            |   |
| December 31, 1985 . . . . .                                   | 5,866                                     | 36,360     | 16.1  |
| December 31, 1986 . . . . .                                   | 5,573                                     | 35,054     | 15.9  |
| 1986 Production . . . . .                                     | 552                                       | 3,711      | 14.9  |
| 1986 Gross Reserve Additions . . . . .                        | 258                                       | 2,405      | 10.7  |
| 1986 Ratio of Gross Reserve Additions to Production . . . . . | 0.47                                      | 0.65       | NM  |
| <b>Proved Reserves</b>  |   |            |   |
| December 31, 1986 . . . . .                                   | 5,587                                     | 35,054     | 15.9  |
| December 31, 1987 . . . . .                                   | 6,291                                     | 35,403     | 17.8  |
| 1987 Production . . . . .                                     | 590                                       | 3,620      | 16.3  |
| 1987 Gross Reserve Additions . . . . .                        | 1,292                                     | 3,969      | 32.6  |
| 1987 Ratio of Gross Reserve Additions to Production . . . . . | 2.19                                      | 1.10       | NM  |
| <b>Dry Natural Gas <sup>c</sup></b>                           |   |            |   |
| <b>Proved Reserves</b>  |   |            |   |
| December 31, 1985 . . . . .                                   | 19,049                                    | 193,369    | 9.9   |
| December 31, 1986 . . . . .                                   | 18,164                                    | 191,586    | 9.5   |
| 1986 Production . . . . .                                     | 1,198                                     | 15,610     | 7.7   |
| 1986 Gross Reserve Additions . . . . .                        | 311                                       | 13,827     | 2.2   |
| 1986 Ratio of Gross Reserve Additions to Production . . . . . | 0.26                                      | 0.89       | NM  |
| <b>Proved Reserves</b>  |   |            |   |
| December 31, 1986 . . . . .                                   | 18,182                                    | 191,586    | 9.5   |
| December 31, 1987 . . . . .                                   | 18,088                                    | 187,211    | 9.7   |
| 1987 Production . . . . .                                     | 1,293                                     | 16,339     | 7.9   |
| 1987 Gross Reserve Additions . . . . .                        | 1,180                                     | 11,977     | 9.9   |
| 1987 Ratio of Gross Reserve Additions to Production . . . . . | 0.91                                      | 0.73       | NM  |

<sup>a</sup>Reserves and production are on a net ownership interest basis. The first set of reserves and production data, under each fuel type, is for companies identified as foreign affiliated and reporting oil and/or natural gas production during 1986. The second set is for companies identified as foreign affiliated during 1987 and reporting oil and/or natural gas production.

<sup>b</sup>Millions of 42-gallon U.S. barrels.

<sup>c</sup>Billions of cubic feet, 14.73 psia, 60 degrees Fahrenheit. Natural gas reserves exclude Alaskan North Slope reserve writedowns.

NM = Not meaningful.

Source: Foreign-affiliated data: Companies' Form 10-K filed with the Securities and Exchange Commission and Annual Reports to Shareholders. U.S. totals: Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1987 Annual Report*, DOE/EIA-0216(87) (Washington, DC, October 1988).

**Table 8. Foreign Crude Oil and Natural Gas Liquids Reserve Interest for FRS Companies, 1986 and Percent Change from 1985**

| Crude Oil and NGL Reserve Interest                          | Total Foreign | Canada | OECD Europe | Africa | Middle East | Other Eastern Hemisphere | Other Western Hemisphere |
|---|---------------|--------|-------------|--------|-------------|--------------------------|--------------------------|
| (million barrels)   |               |        |             |        |             |                          |                          |
| <b>1986</b>   |               |        |             |        |             |                          |                          |
| Total Crude and NGL Reserve Interest <sup>a</sup> . . . . . | 13,203        | 2,356  | 3,788       | 1,630  | 2,059       | 2,405                    | 965                      |
| (percent)   |               |        |             |        |             |                          |                          |
| <b>Percent Distribution by Geographic Region, 1986</b>      |               |        |             |        |             |                          |                          |
| Total Crude and NGL Reserve Interest . . . . .              | 100.0         | 17.8   | 28.7        | 12.3   | 15.6        | 18.2                     | 7.3                      |
| <b>Percent Change from 1985</b>                             |               |        |             |        |             |                          |                          |
| Total Crude and NGL Reserve Interest . . . . .              | -9.5          | 0.2    | -10.1       | -43.3  | -1.2        | 15.5                     | -1.1                     |

<sup>a</sup>The components of total foreign crude oil and natural gas liquids reserve interest are net ownership interest reserves (87.7 percent) and "Other Access" reserves (12.3 percent). "Other Access" reserves include proportional interest in investee reserves and foreign access reserves.

Note: Total may not equal sum of components due to independent rounding. While four of the FRS companies are foreign-affiliated, their foreign reserves are a small portion of the FRS total.

Source: Energy Information Administration, *Performance Profiles of Major Energy Producers 1986*, DOE/EIA-0206(86) (Washington, DC, January 1988).

## Refining and Gasoline Marketing

Refining capacity of foreign-affiliated companies in the United States increased by 7 percent in 1987, following increases of 17 percent and 18 percent in 1985 and 1986, respectively. The total crude oil distillation capacity of foreign-affiliated companies at the end of 1987 was 3.3 million barrels per day, the highest level since at least 1977. The expanded capacity resulted in a 21.0-percent share of U.S. crude oil refining capacity for the foreign-affiliated companies for another high (Table 10). Petroleos de Venezuela's purchase of a 50-percent interest in Champlin's Corpus Christi, Texas refinery and the Hondo Company's merger with Pauley Petroleum and their Newhall, California refinery added 155,000 barrels per day and 23,000 barrels per day, respectively, to the total capacity of foreign affiliates. In 1988, the trend toward greater involvement of oil-producing nations in U.S. downstream operations continued. Texaco announced a joint venture with Saudi Arabian interests which includes three of Texaco's U.S. refineries. Including the crude distillation capacity of these refineries (615,000 barrels per day) in the foreign-affiliated total raises their share to nearly 25 percent.

The FRS companies, which account for virtually all of U.S.-based company activity in foreign refining, continued to decrease their foreign downstream commitments. While their total refining capacity abroad, at 4,638,000 barrels per day, is about 40 percent greater than that of the foreign-affiliated companies operating in the United States, the foreign downstream presence of the FRS companies declined in 1986. The FRS companies' share of foreign refining capacity and output shrank to 12.0 percent and 12.5 percent, respectively. Moreover, their share of the major categories of refining products all declined as well (Table 11).

As measured by share of branded retail gasoline outlets supplied, the role of foreign-affiliated companies in U.S. gasoline marketing in 1987 was nearly unchanged from 1987, at just over 34 percent (Table 12). The largest foreign affiliates reported modest declines in the number of branded outlets supplied. The trend towards fewer but higher volume retail gasoline outlets apparently continued in 1987. For both the affiliates and U.S. industry overall, the number of outlets declined but the volume of gasoline supplied rose between 1986 and 1987. The foreign affiliates' share of gasoline sales was 23 percent in 1987, up from 22 percent in 1986.

**Table 9. Net Production of Petroleum and Dry Natural Gas in the United States by Foreign-Affiliated U.S. Companies, 1985-1987**

| Company                                    | Crude Oil and Natural Gas Liquids <sup>a</sup> |                 |                 | Dry Natural Gas <sup>a</sup> |                   |                   |
|--|--|-----------------|-----------------|------------------------------|-------------------|-------------------|
|  | 1985   | 1986            | 1987            | 1985                         | 1986              | 1987              |
|  | (thousand barrels per day)                     |                 |                 | (billion cubic feet)         |                   |                   |
| BP America, Inc. <sup>b</sup>              | 718.6  | 720.8           | 846.6           | 40.2 <sup>c</sup>            | 56.4 <sup>c</sup> | 87.9 <sup>c</sup> |
| Shell Oil Company                          | 528.8  | 572.6           | 558.9           | 602.0                        | 653.0             | 656.0             |
| Du Pont                                    | 120.5  | 126.0           | 106.8           | 231.0                        | 248.0             | 219.0             |
| Wintershall Corporation                    | 1.2  | 2.0             | 17.0            | 2.9                          | 5.3               | 69.9              |
| American Petrofina                         | 18.6   | 17.4            | 15.9            | 25.4                         | 25.5              | 28.5              |
| BHP Petroleum (Americas)                   | 13.7   | 14.0            | 13.2            | 27.4                         | 35.5              | 50.4              |
| Total Petroleum Limited                    | 4.5  | 6.2             | 6.5             | 8.0                          | 9.8               | 10.6              |
| Total Minatome Corporation                 | NA   | (d)             | 5.7             | NA                           | 1.1               | 17.8              |
| Adobe Resources Corporation                | 2.6  | 7.2             | 5.6             | 5.4                          | 18.0              | 17.8              |
| W.R. Grace Company                         | 5.1  | NF              | NF              | 24.6                         | NF                | NF                |
| Elf Aquitaine Incorporated                 | 4.0  | 6.0             | 4.8             | 14.1                         | 24.7              | 22.3              |
| Newmont Mining                             | 3.9  | 3.9             | 3.9             | 11.1                         | 11.9              | 15.1              |
| Unimar Company                             | 3.9  | 3.3             | 3.0             | 12.2                         | 11.2              | 9.7               |
| Sunshine Mining Company                    | 2.0  | 3.4             | 2.9             | 6.5                          | 13.1              | 12.5              |
| Pauley Petroleum                           | NF   | NF              | 2.9             | NF                           | NF                | 0.5               |
| Home Petroleum <sup>e</sup>                | 4.3  | 3.6             | 2.7             | 13.0                         | 9.0               | 9.4               |
| Triton Energy Corporation                  | 1.2  | 1.8             | 2.4             | 3.0                          | 4.6               | 7.7               |
| Placer Dome Incorporated <sup>f</sup>      | 1.7  | 1.8             | 2.3             | 5.1                          | 7.2               | 8.7               |
| Bow Valley Industries                      | 2.7  | 1.9             | 0.0             | 4.1                          | 3.4               | 0.0               |
| Pan Canadian Petroleum, Ltd                | 0.0  | 2.1             | 1.8             | 0.0                          | 6.0               | 5.0               |
| Canterra Energy Limited                    | 1.8  | 1.5             | 1.7             | 3.8                          | 3.7               | 4.1               |
| Britoil U.S. Holdings Incorporated         | 1.7  | 1.7             | 0.0             | 7.9                          | 7.7               | 0.0               |
| Deminex U.S. Oil Company                   | 2.2  | 2.0             | 1.6             | 3.9                          | 3.7               | 2.9               |
| TransCanada Pipelines Limited              | 1.7  | 1.6             | 1.6             | 4.4                          | 4.3               | 5.7               |
| Universal Resources Corporation            | 1.9  | 1.5             | 0.0             | 8.6                          | 7.3               | 0.0               |
| Chieftain Development Company, Limited     | 0.5  | 1.5             | 1.3             | 0.2                          | 0.2               | 0.4               |
| Gulf Resources & Chemicals                 | 1.4  | 1.2             | 1.0             | 9.0                          | 7.9               | 6.9               |
| Hamilton Oil Corporation                   | 1.0  | 1.2             | 0.9             | 5.2                          | 5.4               | 5.7               |
| Other Companies                            | 5.3  | 5.6             | 6.2             | 14.0                         | 15.2              | 18.9              |
| <b>Total Foreign Affiliated</b>            | <b>1,454.9</b>                                 | <b>1,511.8</b>  | <b>1,617.2</b>  | <b>1,093.0</b>               | <b>1,198.0</b>    | <b>1,293.4</b>    |
| <b>Total for United States<sup>f</sup></b> | <b>10,636.0</b>                                | <b>10,289.0</b> | <b>10,008.0</b> | <b>16,382.0</b>              | <b>15,991.0</b>   | <b>16,339.0</b>   |
| <b>Percent Foreign Affiliated</b>          | <b>13.7</b>                                    | <b>14.7</b>     | <b>16.2</b>     | <b>6.7</b>                   | <b>7.5</b>        | <b>7.9</b>        |

<sup>a</sup>Unless otherwise noted, company production is net ownership interest production.

<sup>b</sup>Previously reported as Standard Oil Company.

<sup>c</sup>Reported sales.

<sup>d</sup>Less than 0.05.

<sup>e</sup>Previously reported as Hiram Walker Resources Ltd.

<sup>f</sup>Previously reported as Placer Development Ltd.

NA = Not available.

NF = Not foreign-affiliated in years shown.

Note: Total may not equal sum of components due to independent rounding.

Sources: Company data: Form 10-K reports to the Securities and Exchange Commission and Annual Reports to Shareholders. Totals for the United States: Energy Information Administration, *Monthly Energy Review*, June 1988, DOE/EIA-0035(88/06) (Washington, DC, September 1988).



Table 10. U.S. Refinery Operations of Foreign-Affiliated U.S. Companies, 1983-1987

| Company                                      | Number of Refineries <sup>a</sup> |             |             |             |             | Total Crude Distillation Capacity <sup>a</sup> |               |               |               |               |
|--|-----------------------------------|-------------|-------------|-------------|-------------|--|---------------|---------------|---------------|---------------|
|  | 1983                              | 1984        | 1985        | 1986        | 1987        | 1983   | 1984          | 1985          | 1986          | 1987          |
| (thousand barrels per day)                   |                                   |             |             |             |             |  |               |               |               |               |
| Shell Oil Company . . . . .                  | 7                                 | 7           | 7           | 7           | 7           | 1,005  | 1,005         | 1,020         | 1,046         | 1,066         |
| BP America <sup>b</sup> . . . . .            | 3                                 | 3           | 4           | 4           | 4           | 456  | 456           | 664           | 668           | 668           |
| Du Pont . . . . .                            | 7                                 | 7           | 6           | 6           | 6           | 421  | 430           | 400           | 393           | 394           |
| Citgo Petroleum . . . . .                    | NF                                | NF          | NF          | 1           | 1           | NF   | NF            | NF            | 320           | 320           |
| Total Petroleum, Ltd. . . . .                | 3                                 | 3           | 3           | 3           | 4           | 145  | 145           | 152           | 154           | 191           |
| Salomon Inc./Hill<br>Petroleum . . . . .     | NF                                | NF          | 1           | 3           | 3           | NF   | NF            | 55            | 154           | 156           |
| Champlin Refining Co. . . . .                | NF                                | NF          | NF          | NF          | 1           | NF   | NF            | NF            | NF            | 155           |
| American Petrofina . . . . .                 | 2                                 | 2           | 2           | 2           | 2           | 150  | 150           | 150           | 145           | 145           |
| Atlantic Petroleum . . . . .                 | NF                                | NF          | 1           | 1           | 1           | NF   | NF            | 125           | 125           | 125           |
| Husky Oil Company . . . . .                  | 2                                 | (c)         | (c)         | (c)         | (c)         | 54   | (c)           | (c)           | (c)           | (c)           |
| Sargent Holdings, Ltd . . . . .              | NF                                | NF          | NF          | 1           | 1           | NF   | NF            | NF            | 33            | 35            |
| Fletcher Oil & Refining . . . . .            | 1                                 | 1           | 1           | 1           | 1           | 30   | 30            | 30            | 30            | 30            |
| Asamera Inc. . . . .                         | 1                                 | 1           | 1           | 1           | (d)         | 26   | 26            | 26            | 28            | (d)           |
| E-Z Serve Inc. . . . .                       | NF                                | NF          | NF          | NF          | 1           | NF   | NF            | NF            | NF            | 20            |
| Pauley Petroleum . . . . .                   | NF                                | NF          | NF          | NF          | 1           | NF   | NF            | NF            | NF            | 23            |
| MacMillan Ring-Free Oil<br>Company . . . . . | 2                                 | 2           | 2           | 2           | 1           | 17   | 17            | 17            | 20            | 14            |
| American Ultramar, Ltd . . . . .             | 2                                 | 1           | 1           | 1           | (e)         | 34   | 17            | 17            | 17            | (e)           |
| <b>Total Foreign Affiliated . . . . .</b>    | <b>30</b>                         | <b>27</b>   | <b>29</b>   | <b>33</b>   | <b>34</b>   | <b>2,337</b>                                   | <b>2,276</b>  | <b>2,656</b>  | <b>3,133</b>  | <b>3,342</b>  |
| <b>Total United States . . . . .</b>         | <b>247</b>                        | <b>223</b>  | <b>216</b>  | <b>219</b>  | <b>213</b>  | <b>16,137</b>                                  | <b>15,659</b> | <b>15,459</b> | <b>15,566</b> | <b>15,915</b> |
| <b>Percent Foreign</b>                       |                                   |             |             |             |             |  |               |               |               |               |
| <b>Affiliated . . . . .</b>                  | <b>12.1</b>                       | <b>12.1</b> | <b>13.4</b> | <b>15.1</b> | <b>16.0</b> | <b>14.4</b>                                    | <b>14.5</b>   | <b>17.2</b>   | <b>20.1</b>   | <b>21.0</b>   |

<sup>a</sup>Refineries operable as of December 31st in each year. Beginning in 1986, the Hawaiian Independent Refinery (66,000 barrels per calendar day) is included in the U.S. total.

<sup>b</sup>Previously reported as Standard Oil Company

<sup>c</sup>Sold to RMT Properties, Inc in 1984.

<sup>d</sup>Sold to Total Petroleum in 1987.

<sup>e</sup>Shut down.

NF = Not foreign affiliated during this period.

Source: 1983: Energy Information Administration, *Petroleum Supply Annual 1983*, Volume 1, DOE/EIA-0340(83)/1(Washington, DC, June 1984). 1984: Energy Information Administration, *Petroleum Supply Annual 1984*, Volume 1, DOE/EIA-0340(84)/1(Washington, DC, June 1985). 1985: Energy Information Administration, *Petroleum Supply Annual 1985*, Volume 1, DOE/EIA-0340(85)/1(Washington, DC, May 1986). 1986: Energy Information Administration, *Petroleum Supply Annual 1986*, Volume 1, DOE/EIA-0340(86)/1(Washington, DC, May 1987). 1987: Energy Information Administration, *Petroleum Supply Annual 1987*, Volume 1, DOE/EIA-0340(87)/1 (Washington, DC, May 1988).

**Table 11. Foreign Refinery Output and Capacity Statistics for FRS Companies and Foreign Industry, 1985 and 1986<sup>a</sup>**

| Refinery Statistics                      | FRS Companies | Foreign Industry | FRS as Percent of Foreign Industry |
|--|---------------|------------------|------------------------------------|
| (thousand barrels per day)               |               |                  |                                    |
| <b>1986</b>                              |               |                  |                                    |
| Refinery Capacity <sup>b</sup> . . . . . | 4,638         | 38,796           | 12.0                               |
| Refinery Output <sup>c</sup> . . . . .   | 4,096         | 32,724           | 12.5                               |
| Percent Gasoline . . . . .               | 29.5          | 20.3             | 18.2                               |
| Percent Distillate . . . . .             | 37.4          | 36.8             | 12.7                               |
| Percent Other . . . . .                  | 33.1          | 43.0             | 9.6                                |
| <b>1985</b>                              |               |                  |                                    |
| Refinery Capacity <sup>b</sup> . . . . . | 5,083         | 38,928           | 13.1                               |
| Refinery Output <sup>c</sup> . . . . .   | 4,137         | 32,191           | 12.9                               |
| Percent Gasoline . . . . .               | 30.0          | 20.1             | 19.2                               |
| Percent Distillate . . . . .             | 37.8          | 35.1             | 13.9                               |
| Percent Other . . . . .                  | 32.1          | 44.8             | 9.2                                |

<sup>a</sup>Foreign FRS and foreign industry data exclude operations in Puerto Rico and the U.S. Virgin Islands, as well as China and the Soviet Bloc.

<sup>b</sup>Year-end crude distillation capacity in thousand barrels per calendar day.

<sup>c</sup>Total output of refined products, for FRS companies, is total output at own refineries and refineries of others for own account.

Note: Total may not equal sum of components due to independent rounding.

Source: FRS companies: Energy Information Administration, *Performance Profiles of Major Energy Producers 1986*, DOE/EIA-0206(86) (Washington, DC, January 1988). Foreign Industry: Energy Information Administration, *International Energy Annual 1986*, DOE/EIA-0219(86) (Washington, DC, October 1987) and Energy Information Administration, *International Energy Annual 1987*, DOE/EIA-0219(87) (Washington, DC, October 1988).

**Table 12. Branded Retail Outlets and Total Gasoline Supplied by Foreign-Affiliated U.S. Companies, 1984-1987**

| Company  | 1984           | 1985           | 1986           | 1987           |
|--|----------------|----------------|----------------|----------------|
| <b>Total Branded Retail Outlets</b>  |                |                |                |                |
| Shell Oil Company . . . . .  | 11,010         | 11,129         | 11,133         | 10,947         |
| BP America <sup>a</sup> . . . . .  | 3,050          | 8,200          | 8,100          | 7,550          |
| Citgo Petroleum <sup>b</sup> . . . . .                                     | NF             | NF             | 7,296          | 7,458          |
| Du Pont . . . . .  | 5,430          | 6,276          | 6,860          | 5,918          |
| American Petrofina . . . . .   | 4,385          | 4,249          | 4,209          | 4,117          |
| Total Petroleum, Limited . . . . .   | 1,847          | 1,942          | 1,915          | 2,394          |
| Atlantic Petroleum . . . . .   | NF             | 547            | 941            | 940            |
| Ultramar . . . . .   | 368            | 378            | 136            | 300            |
| Husky Oil Company . . . . .  | 720            | 0              | 0              | 0              |
| <b>Total for Foreign-Affiliated Companies . .</b>                          | <b>26,810</b>  | <b>32,721</b>  | <b>40,590</b>  | <b>39,624</b>  |
| <b>U.S. Total<sup>c</sup> . . . . .</b>                                    | <b>132,080</b> | <b>124,600</b> | <b>120,150</b> | <b>115,870</b> |
| <b>Foreign-Affiliated Companies as<br/>Percent of U.S. Total . . . . .</b> | <b>20.3</b>    | <b>26.3</b>    | <b>33.8</b>    | <b>34.2</b>    |
| <b>Total Gasoline Supplied<sup>d</sup><br/>(thousand barrels per day)</b>  |                |                |                |                |
| <b>Total for Foreign-Affiliated Companies<sup>e</sup> . .</b>              | <b>1,066</b>   | <b>1,285</b>   | <b>1,565</b>   | <b>1,674</b>   |
| <b>U.S. Total<sup>f</sup> . . . . .</b>                                    | <b>6,693</b>   | <b>6,831</b>   | <b>7,034</b>   | <b>7,206</b>   |
| <b>Foreign-Affiliated Companies as Percent<br/>of U.S. Total . . . . .</b> | <b>15.9</b>    | <b>18.8</b>    | <b>22.2</b>    | <b>23.2</b>    |

<sup>a</sup>Formerly Standard Oil Company. BP America has revised its definition of outlets to include jobbers.

<sup>b</sup>Jobber-supplied outlets.

<sup>c</sup>Service station establishments with 50 percent or more of their dollar volume from petroleum product sales.

<sup>d</sup>Gasoline Supplied refers to average daily gasoline shipments.

<sup>e</sup>Disaggregated company numbers are considered proprietary by the Energy Information Administration.

<sup>f</sup>Total gasoline supplied.

NF= Not foreign affiliated during this period.

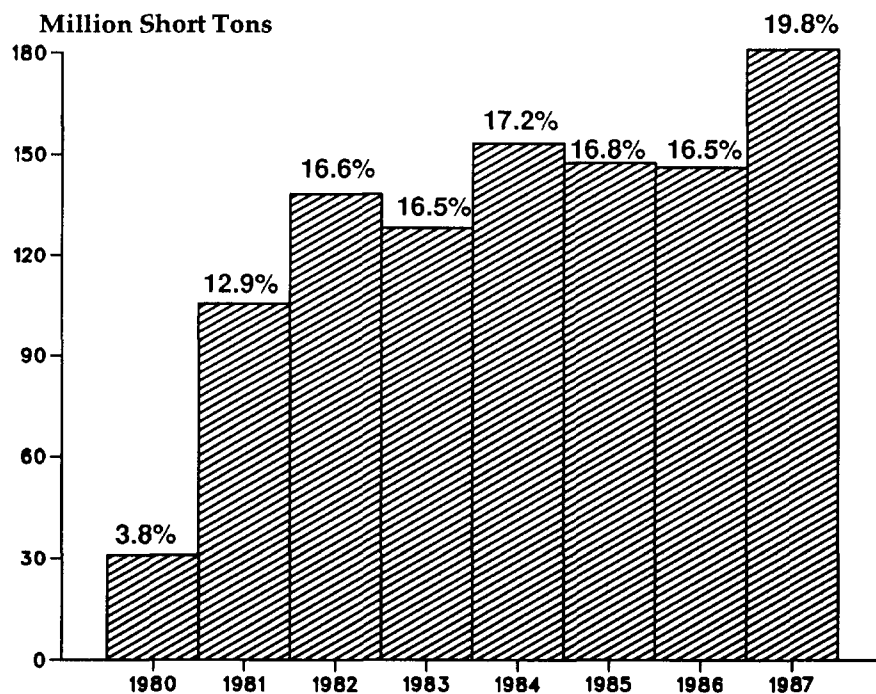
Sources: Company station counts: *National Petroleum News (Factbook Issue)*, 1984-1987, except for Du Pont (1984), BP America (all years), and Husky Oil Company (1984) for which data were taken from *Annual Reports to Shareholders*, and Ultramar (1986) for which data were provided by the company. U.S. total outlets: U.S. Department of Commerce, *Franchising in the Economy, 1986-1988* (Washington, DC, February 1988). Company gasoline volumes: Energy Information Administration, Form EIA-782c. Total gasoline supplied: Energy Information Administration, *Monthly Energy Review*, June 1988, DOE/EIA-0035(88/06) (Washington, DC, September 1988).

## Coal Production

Bituminous coal and lignite production of foreign-affiliated companies grew 24 percent in 1987, following declines in the previous 2 years. Since coal production for the United States, as a whole, grew just 3 percent in 1987, the foreign-affiliated share was a record 19.8 percent (Figure 4). The change in the position of the foreign affiliates can be attributed to activity of three companies: Consolidation Coal Company, Peabody Holding Company, and Shell Mining Company.

Consolidation's production increased by almost 11 million tons in 1987, in part because of its acquisition of Sierra Coal Company and reserves from Inland Steel Company in December, 1986 (Table 13). Peabody, the nation's largest coal producer, made its first appearance in the data base in 1987. This resulted from Consolidated Gold Fields' increase in its share of Newmont Mining, and Newmont Mining's increase in its ownership of Peabody. As a result, the share of Peabody's ownership traceable to Consolidated Gold Fields rose from less than 10 percent to 25 percent. Royal Dutch/Shell Group ended its joint venture with Fluor Corporation in the A.T. Massey Coal Company in 1987, which divided up the properties. Consequently, Shell Mining's coal production increased by 6.7 million tons for the year.

**Figure 4. Production and Share of U.S. Total Bituminous Coal and Lignite for Foreign-Affiliated U.S. Companies, 1980-1987**



Sources: 1980: U.S. Department of Energy, *Annual Report to Congress*, Appendix A, DOE/S-0010(84) (Washington, DC, September 1984). 1981: Energy Information Administration, *Profiles of Foreign Direct Investment in U.S. Energy, 1983*, DOE/EIA-0466 (Washington, DC, February 1985). 1982-1987: *Keystone Coal Industry Manual*, 1983-1988 Editions. U.S. Totals: Energy Information Administration, *Quarterly Coal Report*, DOE/EIA-0121(88/1Q) (Washington, DC, August 1988).

**Table 13. Bituminous Coal and Lignite Production and Source of Ownership of Foreign-Affiliated Coal Companies in the United States, 1984-1987**

| Controlling Company/<br>Foreign-Ownership Interest | Coal Production <sup>a</sup> |        |        |        |
|--|------------------------------|--------|--------|--------|
|  | 1984                         | 1985   | 1986   | 1987   |
|  | (thousand short tons)        |        |        |        |
| Consolidation Coal Co., (Du Pont)                  |                              |        |        |        |
| JES Holding, Inc. . . . .                          | 42,796                       | 42,702 | 41,529 | 52,500 |
| Peabody Holding Co., (Newmont Mining)b             |                              |        |        |        |
| Consolidated Gold Fields . . . . .                 | NF                           | NF     | NF     | 39,476 |
| Shell Oil Co.                                      |                              |        |        |        |
| Royal Dutch Shell . . . . .                        | 8,085                        | 8,240  | 8,738  | 15,445 |
| Old Ben Coal Co. (BP America) <sup>c</sup>         |                              |        |        |        |
| British Petroleum . . . . .                        | 15,666                       | 12,273 | 15,220 | 13,254 |
| Utah Minerals International, Inc.                  |                              |        |        |        |
| Broken Hill Proprietary Co. . . . .                | 15,189                       | 13,812 | 12,651 | 12,996 |
| Westmoreland Coal Co.                              |                              |        |        |        |
| Veba Kohle International . . . . .                 | 12,511                       | 10,876 | 9,840  | 9,654  |
| Pyro Mining Co.                                    |                              |        |        |        |
| Costain Group <sup>d</sup> . . . . .               | 4,200                        | 4,854  | 5,258  | 6,200  |
| Cannelton Industries, Inc.                         |                              |        |        |        |
| Algoma Steel, Ltd. . . . .                         | 2,631                        | 3,003  | 3,411  | 4,054  |
| Pickard Mather & Co.                               |                              |        |        |        |
| Steel Company of Canada . . . . .                  | 2,672                        | 3,561  | 3,555  | 4,014  |
| Ashland Coal Co.                                   |                              |        |        |        |
| Saarbergwerke AG/Carboex . . . . .                 | 2,903                        | 2,798  | 3,269  | 3,950  |
| M.A. Hanna Co. <sup>e</sup>                        |                              |        |        |        |
| Norcen Energy Resources, Ltd. . . . .              | 3,824                        | 3,734  | 3,428  | 3,500  |
| Enoxy Coal, Inc.                                   |                              |        |        |        |
| Ente Nazionale Idrocarburi <sup>f</sup> . . . . .  | 3,771                        | 4,585  | 3,377  | 3,108  |
| Inspiration Coal, Inc.                             |                              |        |        |        |
| Hudson Bay Mining and Smelting Co., Ltd. . . . .   | 1,355                        | 2,762  | 2,859  | 2,785  |
| Great Western Coal Inc. <sup>g</sup>               |                              |        |        |        |
| Great Western Resources, Inc. . . . .              | 2,745                        | 2,453  | 2,597  | 2,564  |
| Andalex Resources, Inc. <sup>h</sup>               |                              |        |        |        |
| Andalex Resources, Inc. . . . .                    | 2,519                        | 1,660  | 2,602  | 2,500  |
| Gulf Resources and Chemical                        |                              |        |        |        |
| HCI Holdings, Ltd./Private Investor . . . . .      | 3,444                        | 2,698  | 2,139  | 1,938  |
| Canterra Coal <sup>i</sup>                         |                              |        |        |        |
| Polysar Energy & Chemical <sup>j</sup> . . . . .   | 998                          | 542    | 526    | 853    |
| Total American Mining <sup>k</sup>                 |                              |        |        |        |
| Total Compagnie Francaise de Petroles . . . . .    | 637                          | 846    | 597    | 764    |
| Tanoma Coal Co., N.V.                              |                              |        |        |        |
| Pohong Steel America, Inc. . . . .                 | 310                          | 540    | 560    | 506    |
| Carter-Roag Coal Co.                               |                              |        |        |        |
| Marquard and Bahls Coal Co. . . . .                | 215                          | 300    | 267    | 387    |
| Avery Coal Co.                                     |                              |        |        |        |
| Trafalgar Industries . . . . .                     | 127                          | 127    | 267    | 275    |
| Coal Corp. of America (Shaker Division)            |                              |        |        |        |
| Campbell Resources . . . . .                       | 646                          | 586    | 250    | 248    |

See footnotes at end of table.

**Table 13. Bituminous Coal and Lignite Production and Source of Ownership of Foreign-Affiliated Coal Companies in the United States, 1984-1987 (Continued)**

| Controlling Company/<br>Foreign-Ownership Interest | Coal Production <sup>a</sup> |                |                |                |
|--|------------------------------|----------------|----------------|----------------|
|  | 1984                         | 1985           | 1986           | 1987           |
|  | (thousand short tons)        |                |                |                |
| A.T. Massey Coal Co. <sup>†</sup>                  |                              |                |                |                |
| Royal Dutch/Shell Group . . . . .                  | 123,541                      | 24,407         | 23,229         | 0              |
| Adobe Oil and Gas Corporation                      |                              |                |                |                |
| Francana Oil and Gas, Ltd. . . . .                 | 2,178                        | 0              | 0              | 0              |
| Husky Oil Co.                                      |                              |                |                |                |
| Husky Oil, Ltd. . . . .                            | 205                          | 0              | 0              | 0              |
| <b>Total Foreign Affiliated . . . . .</b>          | <b>153,168</b>               | <b>147,359</b> | <b>146,169</b> | <b>180,971</b> |
| <b>Total United States . . . . .</b>               | <b>891,759</b>               | <b>878,930</b> | <b>886,023</b> | <b>912,674</b> |
| <b>Percent Foreign Affiliated . . . . .</b>        | <b>17.3</b>                  | <b>16.8</b>    | <b>16.5</b>    | <b>19.8</b>    |

<sup>a</sup>Coal production refers to lignite and bituminous coal production only.

<sup>b</sup>Only Newmont Mining's ownership share of Peabody's production is shown, which is 49.97 percent.

<sup>c</sup>Previously reported as Standard Oil Company.

<sup>d</sup>Joint Venture with Pyro Energy Corporation.

<sup>e</sup>Previously reported as W.R. Grace and Company.

<sup>f</sup>Joint venture with Occidental Petroleum Corp.

<sup>g</sup>Previously reported as Bow Valley Coal Resources.

<sup>h</sup>Previously reported as AMCA Resources.

<sup>i</sup>Previously reported as Aquitaine Company of Canada and Canterra Energy.

<sup>j</sup>Previously reported as Canada Development Corporation.

<sup>k</sup>Previously reported as Total Energy Resources.

<sup>l</sup>Joint venture with Fluor Corporation. The joint venture was dissolved in 1987.

NF = Not foreign affiliated during this period.

Sources: Coal ownership - Securities and Exchange Commission Form 13-D; *Moody's Industrial Manual, 1984-87*; U.S. Department of Commerce, International Trade Administration, *Foreign Direct Investment Activity in the United States*. Coal company production data - 1987: *Keystone News Bulletin* (Stamford, CT: Maclean Hunter Publishing Co., May 27, 1988). 1986: *1987 Keystone Coal Industry Manual* (New York: McGraw-Hill Inc., 1987). 1985: *1986 Keystone Coal Industry Manual* (New York: McGraw-Hill Inc., 1986). 1984: *1985 Keystone Coal Industry Manual* (New York: McGraw-Hill Inc., 1985). U.S. total for coal production - Energy Information Administration, *Quarterly Coal Report*, DOE/EIA-0121(88/2Q) (Washington, DC, October 1988).

## Uranium Exploration and Development

Expenditures by foreign-affiliated companies for U.S. uranium exploration and development (E&D) again predominated the uranium industry in 1987. Since foreign participation in U.S. E&D fell only slightly to \$11.9 million while total E&D declined by \$2.5 million, the foreign share rose to 60.6 percent, a new high (Table 14). Five additional companies engaged in uranium activity in 1987, while two ceased operations. UP Resources (formerly Rocky Mountain Energy) continued to work with Taiwan Power Company on uranium exploration in northern Arizona and other western states, and had several finds in 1987.<sup>12</sup>

<sup>12</sup>Union Pacific Corporation, *Annual Report* (New York, 1987), p. 14.

**Table 14. Foreign Participation in U.S. Uranium Exploration and Development, 1976-1987**

| Year | Exploration<br>and Development<br>Expenditures by<br>Foreign Companies | Total U.S.<br>Exploration<br>and Development<br>Expenditures | Foreign<br>Expenditures<br>As Percent<br>of U.S. Total | Number of<br>Foreign-Affiliated<br>Companies |
|------|--|--|--|--|
|      | (million dollars)  |  |  |  |
| 1976 | 13.2   | 170.7  | 7.7  | 15   |
| 1977 | 21.7   | 258.1  | 8.4  | 17   |
| 1978 | 39.3   | 314.3  | 12.5   | 31   |
| 1979 | 34.1   | 315.9  | 10.8   | 28   |
| 1980 | 37.6   | 267.0  | 14.1   | 28   |
| 1981 | 24.6   | 144.8  | 17.0   | 25   |
| 1982 | 14.6   | 73.6   | 19.8   | 14   |
| 1983 | 4.8  | 36.9   | 13.0   | 9  |
| 1984 | 6.6  | 26.5   | 24.9   | 9  |
| 1985 | 5.6  | 20.1   | 27.9   | 6  |
| 1986 | 12.0   | 22.1   | 54.4   | 8  |
| 1987 | 11.9   | 19.6   | 60.6   | 11   |

Source: Energy Information Administration, *Uranium Industry Annual 1987*, DOE/EIA-0478(87) (Washington, DC, September 1988), pp. 14, 18.





## 4. Financial Profiles and Transactions of Foreign-Affiliated U.S. Energy Companies

As stated in Chapter 2 of this report, the measures of FDI and associated income published by the U.S. Department of Commerce are designed to conform with the international transactions accounts. These measures are not designed to gauge the performance of foreign-affiliated U.S. companies from a financial reporting perspective. In order to provide a financial performance perspective, comparisons of corporate financial indicators between foreign-affiliated U.S. energy companies and other U.S. energy companies are presented in the following Financial Profiles section.<sup>13</sup> Aspects of corporate financial performance reported in this section include investment, growth, and profitability.

### Financial Profiles

Higher crude oil prices led to a general recovery in energy company revenues and income in 1987. The sharp oil price decline that occurred in the first half of 1986 led to lower energy prices and adversely affected the income of most U.S. energy producers. As shown in Table 15, overall energy income fell by more than 80 percent in 1986 from the prior year's level. Profitability, as measured by return on equity, was near zero. The collapse in income was caused not only by greatly diminished upstream earnings but also by the write-offs associated with reduced values of reserves and abandonments of drilling projects. The recovery in oil prices of nearly \$3 per barrel, on an annual basis, between 1986 and 1987 was largely responsible for the nearly four-fold increase in the income of energy companies from the low levels registered in 1986. Profitability improved as well, with the energy companies' return on equity rising to 5.8 percent. However, the profitability of energy companies remained noticeably below that of all U.S. manufacturing corporations, a situation evident since 1985 (Figure 5).

**Table 15. Annual Change in Net Income and Return on Stockholders' Equity, 1985-1987**  
(Percent)

| Industries                                    | Percent Change in Net Income |                   |                                | Return on Stockholders' Equity <sup>a</sup> |      |                   |
|---|------------------------------|-------------------|--------------------------------|---|------|-------------------|
|   | 1985                         | 1986              | 1987                           | 1985  | 1986 | 1987              |
| U.S. Energy Companies <sup>b</sup> . . . . .  | -38.3                        | -83.9             | 279.3                          | 6.5   | 1.6  | 5.8               |
| All U.S. Manufacturing Corporations . . . . . | <sup>c</sup> -18.6           | <sup>c</sup> -5.1 | <sup>c</sup> <sup>d</sup> 41.9 | 10.1  | 9.5  | <sup>d</sup> 13.2 |

<sup>a</sup>Net Income as a percent of year-end stockholders' equity.

<sup>b</sup>Includes both groups of companies shown in Table 16.

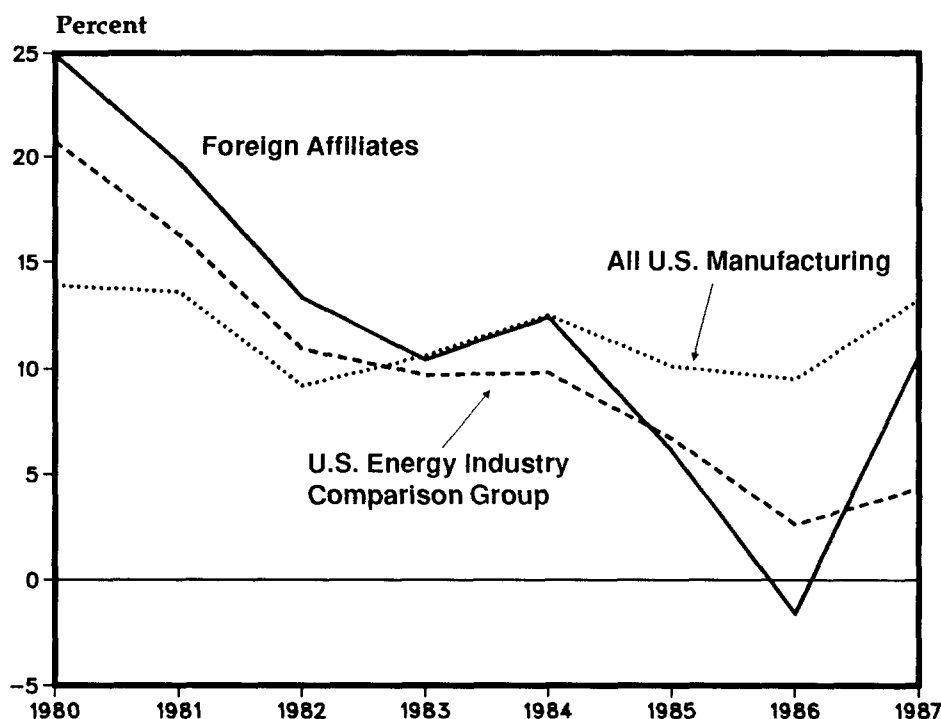
<sup>c</sup>Percent change in corporate profits after income taxes.

<sup>d</sup>1987 figure is the annual average through the third quarter.

Source: Energy companies: Compustat II Industrial File. Corporate profits after income taxes for all U.S. manufacturing corporations and return on stockholders' equity for all U.S. manufacturing corporations: *Economic Report of the President 1988*, p. 352.

<sup>13</sup>The financial information presented in this section was drawn from the consolidated financial statements contained in Standard and Poor's Compustat II Industrial File. The U.S. energy industry comparison group is composed of companies other than the foreign-affiliated companies on the Compustat file that are classified under the four-digit Standard Industrial Classification (SIC) industry categories of crude oil and natural gas production (1311), petroleum refining (2911), oilfield services (1381, 1382, and 1389), and bituminous coal and lignite production (1211), excluding companies that have been identified as foreign-affiliated, or companies whose operations are foreign-based, or companies whose operations are already included in U.S. companies that have been identified as foreign-affiliated.

**Figure 5. Return on Equity for Foreign-Affiliated U.S. Energy Companies, Other Energy Companies, and All U.S. Manufacturing Corporations, 1980-1987**



Sources: Energy companies: Compustat II Industrial File and company annual reports. All U.S. manufacturing corporations: *Economic Report of the President* 1988.

In 1987, financial performance improved for both the foreign-affiliated energy companies and the energy industry comparison group. Net income of the foreign affiliates was \$4.7 billion in 1987 compared to losses of \$700 million in the prior year (Table 16). Over 90 percent of the foreign-affiliated energy companies reported gains in income or reductions in losses between 1986 and 1987. Profitability, as measured by the foreign affiliates' return on equity, rebounded from a sub-zero level to a level comparable to that registered in the 1983-1985 period (Figure 5). Profit improvement was evident for other energy companies in 1987 as well with a 75-percent increase in overall net income for the energy industry comparison group from \$3.6 billion to \$6.3 billion, and a rise in return on equity from 2.6 percent to 4.3 percent. The performance of this latter group was depressed by Texaco's \$4.9-billion special charge against net income, occasioned by an adverse legal judgement and by restructuring charges in 1987. Excluding Texaco, the energy industry comparison group registered a net income increase of \$7.8 billion and their return on equity was noticeably higher at 7.9 percent in 1987.

Cash flow from operations, for both groups of energy companies, also improved in 1987. This was largely as a result of the increase in net income attending the partial recovery in oil prices. The foreign-affiliated energy companies gained slightly over \$1 billion in cash flow in 1987. This was a 9-percent increase over the prior year. The other energy comparison group registered a slight 2-percent rise. The lesser increase of the other energy comparison group was accounted for by a decrease in cash flow, reported by most of the major petroleum companies.

Although prospects for oil prices improved in 1987, as did net income and cash flow of energy companies, capital outlays in 1987 for the foreign-affiliated energy companies and other energy companies were down 2 percent and 6 percent, respectively, from prior-year levels. The sharp cutbacks in expenditures for energy investments effected in 1986 carried over into the first half of 1987. Since then, energy company capital expenditures have been on an upward trend.

**Table 16. Selected Financial Information for Foreign-Affiliated U.S. Energy Companies, 1986 and 1987**

| Category                                | Foreign-Affiliated U.S. Energy Companies <sup>a</sup> |       |                | U.S. Energy Industry Comparison Group <sup>b</sup> |       |                |
|---|---|-------|----------------|--|-------|----------------|
|   | 1986  | 1987  | Percent Change | 1986   | 1987  | Percent Change |
|   | (billion dollars)                                     |       |                | (billion dollars)                                  |       |                |
| Financial Items                         |   |       |                |  |       |                |
| Revenues . . . . .                      | 70.0  | 84.9  | 21.3           | 315.8  | 341.4 | 8.1            |
| Net Income . . . . .                    | -0.7  | 4.7   | NM             | 3.6  | 6.3   | 75.0           |
| Cash Flow <sup>c</sup> . . . . .        | 12.3  | 13.4  | 8.9            | 41.6   | 42.3  | 1.7            |
| Capital Outlays . . . . .               | 8.6   | 8.4   | -2.3           | 28.5   | 26.8  | -6.0           |
| Total Assets . . . . .                  | 96.1  | 104.5 | 8.9            | 372.5  | 379.3 | 1.8            |
| (percent)                               |   |       |                |  |       |                |
| Financial Ratio                         |   |       |                |  |       |                |
| Return on Equity <sup>d</sup> . . . . . | -1.6  | 10.6  |                | 2.6  | 4.3   |                |
| Dividends/Net Income . . . . .          | NM  | 95.0  |                | 304.9  | 167.8 |                |
| Dividends/Cash Flow . . . . .           | 22.1  | 33.7  |                | 26.3   | 24.9  |                |
| Debt/Equity <sup>e</sup> . . . . .      | 34.0  | 37.1  |                | 60.4   | 50.6  |                |

<sup>a</sup>Includes incorporated U.S. energy companies which are foreign-affiliated and for which publicly reported financial information is available. Also included are foreign parent companies for which data for U.S. operations were not separately disclosed. For 1986 these companies were: Adobe Resources Corp., American Petrofina, Arabian Shield Development Co., Asamera Inc., Barret Resources Corp., Bengal Oil and Gas Corp., Bow Valley Industries Ltd., Campbell Resources Inc., Castle Energy Corp., Chieftain Development Co. Ltd., DI Industries, Inc., E.I. du Pont de Nemours and Company, Gulf Resources and Chemical Co., Hamilton Oil Corp., Harken Oil and Gas Inc., Inspiration Resources Corp., Inter-City Gas Corp., M.A. Hanna Co., MacMillan Ring-Free Oil Co., MSR Exploration Ltd., Newmont Mining Corp., North Canadian Oils Ltd., Oceanic Exploration Co., Panhandle Eastern Corp., Petrotech Inc., Placer Dome Inc., Premier Resources Ltd., Pyro Energy Corp., Ranger Oil Ltd., Rio Algom Ltd., Schlumberger Ltd., Scurry-Rainbow Oil Ltd., Seagull Energy Corp., Shell Oil Co., Southland Energy Corp., Standard Oil Company, Sunshine Mining Co., Total Petroleum (North America), Triton Energy Corp., Unimar Co., United Canso Oil and Gas Ltd., Westmoreland Coal Co., and Woodbine Petroleum Inc. In 1987, eight additional companies are included, all of which were partly or wholly acquired by foreign entities during 1987. The additional companies are: DRX Inc., Gold King Consolidated Inc., Harcor Energy Inc., Kencope Energy Companies, Oxoco Inc., Pauley Petroleum Inc., Taurus Petroleum Inc., and Valex Petroleum Inc. Also, beginning with 1987, BP America replaced Standard Oil Company due to the consolidation of the latter company with BP North America. For 1987, the following companies were deleted because they reported no U.S. energy production in 1987: Asamara Inc., Bow Valley Industries Ltd., Campbell Resources Inc., North Canadian Oils Ltd., Scurry-Rainbow Oil Ltd., Southland Energy Corp., and United Canso Oil and Gas Ltd. All data for the companies were derived from the Compustat II Industrial File except the data for Standard Oil Company which were obtained from annual reports to shareholders.

<sup>b</sup>The comparison group is derived from aggregates available from the Compustat II Industrial File for the following four digit (SIC) industries: 1211 (bituminous coal and lignite mining), 1311 (crude petroleum and natural gas production), 1381 (oil and gas well drilling), 1382 (oil and gas field exploration), 1389 (oil and gas field services), and 2911 (petroleum refining). The Compustat aggregates are adjusted by subtracting out data for companies which have been identified as foreign-affiliated, or whose operations are foreign-based, or foreign-based companies whose U.S. operations are already included in U.S. companies identified as foreign-affiliated. The value of the financial items reported above for 1986 for the comparison group are lower than the values reported in the previous edition of this report due to reclassifications of companies to other industries.

<sup>c</sup>Measured as funds from operations.

<sup>d</sup>Defined as net income divided by year-end stockholders' equity.

<sup>e</sup>Defined as year-end long-term debt divided by year-end stockholders' equity.

NM = Not meaningful.

Source: Compiled from Compustat II Industrial File and company annual reports.

Revenues and total assets reported in Table 16 for the foreign-affiliated energy companies indicate considerably greater corporate growth for this group as compared to other energy companies. Most of the difference in growth is traceable to the consolidation of British Petroleum's North American operations with those of Standard Oil's in the formation of BP America. Excluding BP America (for 1987) and Standard Oil (for 1986), revenue growth for the foreign affiliates was 14 percent and growth in total assets was 1.4 percent. Revenue and total assets growth for foreign affiliates are in line with the growth registered by other energy companies. Between 1986 and 1987, foreign affiliates showed a sharp increase in dividends paid. The ratio of dividends to cash flow rose from 22 percent to 34 percent for this group. The increase was accounted for by a special dividend of \$2.2 billion paid by Newmont Mining Corporation in fending off a takeover attempt in 1987.

## *Foreign Direct Investment Transactions in U.S. Energy Markets*

This section presents a summary of equity acquisitions, mergers, joint ventures, lease acquisitions, and other transactions related to FDI activity in 1987. The transactions identified in this section were derived from a variety of public sources and do not necessarily reflect the confidential data submitted by foreign affiliates to the U.S. Department of Commerce, as reported in Chapter 2. However, the transactions reported in this section are taken from the most accurate information that is publicly available and should describe broad trends and developments in the composition of FDI in U.S. energy.<sup>14</sup>

The FDI-related transactions in 1987 continued the trends and developments of recent years. The largest transaction was British Petroleum's gain of 100-percent ownership of Standard Oil for \$7.8 billion. This stock acquisition was the largest single FDI-related transaction in history, which heretofore had been Royal Dutch/Shell's gain of 96 percent ownership of Shell Oil Company in 1984 (100 percent ownership was gained in 1985). Foreign interests in U.S. downstream operations continued to increase in 1987. Petroleos de Venezuela entered a joint venture with Champlin Petroleum in which the two companies became 50-percent partners in Champlin's Corpus Christi refinery. The transaction was valued at \$93 million and follows a similar transaction by the Venezuelan state oil company in which it became a 50-percent joint venture partner in Citgo Petroleum's Lake Charles, Louisiana, refinery in 1986. Direct acquisitions of refining facilities in 1987 included First Oil International's acquisition of Chevron's Puerto Rican refinery, in a transaction valued at \$100 million, and Elf Aquitaine's acquisition of Riffe Petroleum's asphalt operations for \$68 million. Japanese companies again entered into joint U.S. drilling ventures with major U.S. petroleum companies. Chevron and Nippon Oil Company became partners in a joint drilling venture valued at \$100 million, and JAPEX and Amoco agreed to a joint drilling venture valued at \$14 million. In 1986, Du Pont's Conoco unit and Nippon Mining Company formed a joint drilling venture valued at \$135 million. Other large transactions related to upstream petroleum operations in 1987 included Total Minatome's acquisition of oil and gas properties from Texas International Company for \$120 million, Shell Oil's purchase of properties from United Texas Petroleum for \$83 million, Wintershall Corporation's acquisition of Mid Louisiana Gas Company from Tenneco for \$80 million, and American Petrofina's acquisition of properties from the Exploration Company of Louisiana for \$79 million.

Newmont Mining Corporation, which is primarily a gold mining company with significant coal production (through its ownership interest in Peabody Holding Company) and oil and gas production, was involved in two large FDI-related transactions in 1987. In the first transaction, Consolidated Gold Fields increased its ownership share in Newmont, from 26.3 percent to 49.4 percent for \$1.6 billion, pursuant to fending off an attempted takeover of Newmont. In the other transaction, valued at \$320 million, Newmont increased its ownership share in Peabody Holding Company, which ranks first in U.S. coal production, from 30.7 percent to 49.97 percent in 1987.

Changes in ownership between foreign-affiliated companies accounted for two of the larger FDI-related transactions in 1987. Broken Hill Proprietary Company, an Australian Company with significant U.S. oil, gas, and coal production, acquired Sweden's AB Volvo's majority ownership in Hamilton Oil for \$394 million. Great Western Resources, which is affiliated with Canadian interests, acquired Bow Valley Resources which was a subsidiary of another Canadian company, Bow Valley Industries, for \$141 million.

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<sup>14</sup>The identified FDI-related transactions for 1987 are listed in Tables A1 and A2 in the Appendix, as are the information sources. Information for 1981 and 1982 FDI-related transactions is drawn from Appendix A of the U.S. Department of Energy, *Annual Report to Congress*, DOE/S-0010(83) (Washington, DC, September 1983), and Appendix A of U.S. Department of Energy, *Annual Report to Congress*, DOE/S-0010(84) (Washington, DC, September 1984), respectively. The 1983 information appeared in Energy Information Administration, *Profiles of Foreign Direct Investment in U.S. Energy 1983*, DOE/EIA-0466 (Washington, DC, February 1985), 1984 information appeared in Energy Information Administration, *Profiles of Foreign Direct Investment in U.S. Energy 1984*, DOE/EIA-0466(84) (Washington, DC, December 1985), 1985 information appeared in Energy Information Administration, *Profiles of Foreign Direct Investment in U.S. Energy 1985*, DOE/EIA-0466(85) (Washington, DC, January 1987), and 1986 information appeared in Energy Information Administration, *Profiles of Foreign Direct Investment in U.S. Energy 1986*, DOE/EIA-0466(86) (Washington, DC, December 1987). It should be noted that because the information utilized in this section can only come from public sources, validation is not always possible. Nevertheless, the information presented in this section is useful for discerning broad trends in the composition of FDI-related transactions.

Based on the information contained in the Appendix, the values of the 1987 FDI-related transactions were classified by industry and type of transaction. The share of transaction values ascribable to U.S. coal operations rose from 8 percent in 1986 to 19 percent in 1987, while the petroleum share fell from 92 percent to 82 percent (Table 17). The apparent rise in foreign investor interest in coal is largely due to classifying the two transactions involving Newmont Mining Company into the coal category. Although Newmont is primarily a gold mining operation, the value of their investments in Peabody Holding Company exceed the value of their assets in oil and gas which is the basis for classifying the Newmont transactions as related primarily to coal.

The composition of FDI-related transactions increased toward acquisitions of ownership in 1987. Over 90 percent of the value of transactions was classified as stock/equity acquisitions, a much greater share than in any previous year for which this compilation has been made (Table 18). The increase in the value of stock/equity acquisitions is traceable to British Petroleum's increase in ownership of Standard Oil, from 55 percent to 100 percent for \$7.8 billion, and the gain in equity in Newmont Mining by Consolidated Gold Fields for \$1.6 billion. Although the share of transaction values classified as property and lease acquisitions fell from 24 percent in 1986 to 4 percent in 1987, the total value of property and lease acquisitions actually increased by 1 percent.

**Table 17. Distribution of the Value of Foreign Direct Investment Transactions<sup>a</sup>  
by Industry, 1981-1987  
(Percent)**

| Industry               | 1981         | 1982         | 1983         | 1984         | 1985         | 1986         | 1987         |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Petroleum . . . . .    | 79.6         | 60.3         | 87.8         | 77.2         | 99.1         | 91.5         | 81.3         |
| Coal . . . . .         | 20.2         | 32.4         | 11.3         | 19.7         | 0.9          | 7.6          | 18.7         |
| Other . . . . .        | 0.2          | 7.3          | 1.0          | 3.1          | 0.0          | 0.9          | 0.0          |
| <b>Total . . . . .</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

<sup>a</sup>Excludes transactions for which dollar values were not reported.

Note: Total may not equal sum of components due to independent rounding.

Source: 1987: the percent distribution is based on Tables A1 and A2 in the Appendix. 1981-1986: Energy Information Administration, *Profiles of Foreign Direct Investment in U.S. Energy 1986*, DOE/EIA-0466(86) (Washington, DC, December 1987).

**Table 18. Distribution of the Value of Foreign Direct Investment Transactions<sup>a</sup>  
by Type of Transaction, 1981-1987  
(Percent)**

| Type of Transaction <sup>b</sup> | 1981         | 1982         | 1983         | 1984         | 1985         | 1986         | 1987         |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Stock/Equity Acquisition . .     | 74.1         | 58.2         | 16.9         | 61.5         | 49.1         | 57.6         | 91.8         |
| Property or Lease Acquisition    | 16.7         | 10.6         | 55.7         | 31.6         | 29.2         | 24.2         | 4.4          |
| Joint Venture . . . . .          | 9.2          | 10.2         | 4.1          | 0.9          | 0.3          | 16.3         | 1.9          |
| Other . . . . .                  | (c)          | 21.0         | 23.4         | 6.0          | 21.4         | 1.9          | 1.9          |
| <b>Total . . . . .</b>           | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

<sup>a</sup>Excludes transactions for which dollar values were not reported.

<sup>b</sup>Stock/equity acquisitions include purchases of common stock and purchases of subsidiary companies of U.S. corporations. Property or lease acquisitions include purchase of producing energy properties and acquisitions of leases from Federal and state governments. Joint ventures include the value of a foreign entity's share in a joint venture in the United States. Other transactions largely consist of plant expansions, long-term supply contracts, and purchase of existing plant and equipment.

<sup>c</sup>Less than 0.05 percent.

Note: Total may not equal sum of components due to independent rounding.

Source: 1987: the percent distribution is based on Tables A1 and A2 in the Appendix. 1981-1986: Energy Information Administration, *Profiles of Foreign Direct Investment in U.S. Energy 1986*, DOE/EIA-0466(86) (Washington, DC, December 1987).



**Appendix**  
**Completed Foreign**  
**Direct Investment**  
**Transactions, 1987**





**Table A1. Completed Transactions by Size in the Petroleum Industry from January 1987 through December 1987**

| Acquiring Company  | Acquiring Company Activity               | Affected Company                              | Affected Company Activity                         | Type of Transaction        | Size of Transaction<br>(million dollars) | Date of Transaction |
|--|--|---|---|----------------------------|--|---------------------|
| <b>British Petroleum PLC</b><br>(United Kingdom)<br>BP North America Inc.                      | Integrated petroleum operations          | Standard Oil Co. (OH)                         | Integrated petroleum operations                   | Equity acquisition         | 7,800                                    | 5-87                |
| <b>Broken Hill Proprietary Co. Ltd.</b> (Australia)  | Diversified energy, mining manufacturing | Hamilton Oil Corp. (AB Volvo's interest) (CO) | Oil and gas exploration and production            | Equity acquisition         | 394.2                                    | 10-87               |
| <b>Total Compagnie Francaise des Petroles</b> (France)<br>Total Minatome Corp.                 | Integrated petroleum operations          | Texas International Co. (OK)                  | Oil and gas exploration and production            | Property acquisition       | 120                                      | 3-87                |
| <b>First Oil International Ltd.</b> (Kenya)<br>Gad Zeevi                                       | Oil and gas investments                  | Chevron (CA)                                  | Refining operations                               | Asset acquisition          | 100                                      | 6-87                |
| <b>Nippon Oil Co. Ltd.</b> (Japan)   | Oil and gas exploration and development  | Chevron (CA)                                  | Oil and gas exploration and development           | Joint venture              | 100                                      | 4-87                |
| <b>Petroleos de Venezuela</b> (Venezuela)  | National Petroleum Company of Venezuela  | Union Pacific Corp. (NY)                      | Refining and marketing operations                 | Joint venture              | 93                                       | 4-87                |
| <b>Royal Dutch/Shell Group</b> (Netherlands)<br>Shell Western Exploration and Production, Inc. | Oil and gas exploration and production   | United Texas Petroleum Inc. (TX)              | Oil and gas exploration and production            | Property acquisition       | 83                                       | 6-87                |
| <b>Wintershall AG</b> (West Germany)<br>Wintershall Corp.                                      | Oil and gas exploration and production   | Tenneco Corp. (TX)                            | Natural gas, industrial                           | Property acquisition       | 80                                       | 11-87               |
| <b>Petrofina S.A.</b> (Belgium)<br>Fina Oil and Chemical Co.                                   | Integrated petroleum operations          | Exploration Company of Louisiana (LA)         | Oil and gas exploration and production            | Lease/Property acquisition | 79                                       | 10-87               |
| <b>Societe Nationale Elf Aquitaine</b> (France)<br>Elf Aquitaine Inc.                          | Natural resources, petrochemicals        | Charter Company (FL)                          | Oil and gas exploration and production, marketing | Asset acquisition          | 67.8                                     | 10-87               |
| <b>Royal Dutch/Shell Group</b> (Netherlands)<br>Shell Offshore, Inc.                           | Oil and gas exploration and production   | Oil and gas in the Gulf of Mexico (LA)        | NA  | Lease acquisition          | 56                                       | 8-87                |
| <b>Minerals and Resources, Ltd.</b> (Bermuda)<br>Adobe Resources Corp.                         | Oil and gas exploration and production   | Gas Gathering Systems Inc. (NY)               | Natural gas production and transportation         | Equity acquisition         | 46                                       | 12-87               |
| <b>Royal Dutch/Shell Group</b> (Netherlands)<br>Shell Western Exploration and Production, Inc. | Oil and gas exploration and production   | New Paraho Corp. (CO)                         | Oil shale research and development                | Property acquisition       | 37                                       | 6-87                |

**Table A1. Completed Transactions by Size in the Petroleum Industry from January 1987 through December 1987 (Continued)**

| Acquiring Company  | Acquiring Company Activity                        | Affected Company                     | Affected Company Activity                                  | Type of Transaction  | Size of Transaction<br>(million dollars) | Date of Transaction |
|--|---|--------------------------------------|--|----------------------|--|---------------------|
| <b>Traco International N.V. (Netherlands)</b><br>Harken Oil and Gas Inc.                       | Oil and gas exploration and production, marketing | E-Z Serve Inc. (TX)                  | Wholesaling, distribution of oil and gas products          | Equity acquisition   | 36.3                                     | 1-87                |
| <b>Total Compagnie Francaise des Petroles (France)</b><br>Total Petroleum (North America) Ltd. | Integrated petroleum operations                   | Asamera Oil (CAN)                    | Refining operations  | Asset acquisition    | 25.2                                     | 6-87                |
| <b>Costain Group PLC (United Kingdom)</b><br>Wacker Oil Co.                                    | Oil and gas exploration and production            | Valero Energy Company (TX)           | Oil refining, marketing                                    | Asset acquisition    | 20                                       | 10-87               |
| <b>Ampol Exploration (Australia)</b>   | Diversified natural resources                     | Ranger Oil Ltd. (CAN)                | Oil and gas exploration and production                     | Property acquisition | 18.5                                     | 5-87                |
| <b>Traco International N.V. (Netherlands)</b>  | Investment holdings                               | Harken Oil and Gas Inc. (TX)         | Oil and gas exploration and production, marketing          | Equity acquisition   | 17.5                                     | 12-87               |
| <b>Japan Petroleum Exploration Co. Ltd. (Japan)</b><br>Japex                                   | Oil and gas exploration and development           | Amoco (IL)                           | Oil and gas exploration and development                    | Joint venture        | 14.3                                     | 5-87                |
| <b>Petroleo Brasileiro (Brazil)</b>  | Oil and gas exploration and development           | Texaco Inc. (NY)                     | Oil and gas exploration and development                    | Joint venture        | 10                                       | 12-87               |
| <b>Flukland Pension Funds Ltd. (New Zealand)</b><br>Triton Energy Corp.                        | Oil and gas mineral, exploration and production   | Mosley Petroleum (TX)                | Oil and gas exploration and production                     | Equity acquisition   | 5.9                                      | 10-87               |
| <b>New London Oil PLC (United Kingdom)</b>   | NA  | Kencope Energy Company (TX)          | Oil field services, oil and gas exploration and production | Equity acquisition   | 5.6                                      | 9-87                |
| <b>Flukland Pension Funds Ltd. (New Zealand)</b>   | Investment holdings                               | Triton Energy Corp. (TX)             | Oil and gas, mineral exploration and production            | Equity acquisition   | 5.6                                      | 10-87               |
| <b>Arabian Shield Development Co. (Saudi Arabia)</b><br>American Shield Refining Company       | Petroleum refining                                | Texas Oil and Chemical Co. Inc. (TX) | Petroleum refining   | Equity acquisition   | 5  | 6-87                |
| <b>Victoria Exploration N.L. (Australia)</b><br>Victoria Exploration Inc.                      | Diversified natural resources                     | Royal Resources Corp. (CO)           | Oil and gas exploration and production                     | Property acquisition | 3.7                                      | 2-87                |
| <b>TMOC Resources (Australia)</b><br>Avalon Energy Inc.  | Oil and gas exploration and development           | Mobil Oil Corp. (NY)                 | Integrated petroleum operations                            | Property acquisition | 3.5                                      | 5-87                |
| <b>Bryson Oil and Gas PLC (United Kingdom)</b>   | Oil and gas exploration and development           | Energy Corp. (TX)                    | Oil and gas exploration and production                     | Equity acquisition   | 3.5                                      | NA                  |

**Table A1. Completed Transactions by Size in the Petroleum Industry from January 1987 through December 1987 (Continued)**

| Acquiring Company  | Acquiring Company Activity                          | Affected Company                       | Affected Company Activity                        | Type of Transaction  | Size of Transaction | Date of Transaction |
|--|---|--|--|----------------------|---------------------|---------------------|
|  |   |  |  |                      | (million dollars)   |                     |
| <b>Total Compagnie Francaise des Petroles</b> (France)                           | Integrated petroleum operations                     | Total Petroleum (N. America) Ltd. (CO) | Integrated petroleum operations                  | Equity acquisition   | 3.4                 | 12-87               |
| <b>Phoenix Venture S.A.</b> (Bahamas)  | Investment holdings                                 | Oxoco Inc. (TX)                        | Oil and gas exploration and production           | Equity acquisition   | 2.8                 | 2-87                |
| <b>Industrial Engineering Ltd.</b> (Australia)                                   | Investment holdings                                 | Triton Energy Corp. (TX)               | Petroleum, mineral exploration and production    | Equity acquisition   | 1.2                 | 9-87                |
| <b>United Guarantee PLC</b> (United Kingdom)                                     | Investment holdings                                 | DRX Inc. (CO)                          | Oil and gas exploration and production           | Equity acquisition   | 0.5                 | 12-87               |
| <b>Cornwall Petroleum Corp. N.L.</b> (Australia)                                 | Oil and gas exploration and production              | Taurus Petroleum Inc. (CO)             | Oil and gas exploration and development          | Equity acquisition   | 0.4                 | 7-87                |
| <b>Industrial Equity Pacific Ltd.</b> (Hong Kong)                                | Investment holdings                                 | Reserve Oil and Minerals Corp. (NM)    | Uranium, oil and gas exploration and development | Equity acquisition   | 0.01                | 1-87                |
| <b>TMOC Resources Ltd.</b> (Australia) Avalon Corp.                              | Oil and gas exploration and production, real estate | JN Oil and Gas Inc. (MT)               | Oil and gas exploration and development          | Property acquisition | NA                  | 8-87                |
| <b>TMOC Resources Ltd.</b> (Australia) Avalon Corp.                              | Oil and gas exploration and production, real estate | Wessely Energy Co. (TX)                | Oil and gas production and distribution          | Property acquisition | NA                  | 9-87                |
| <b>Cometra Oil Co.</b> (Belgium) American Cometra Inc.                           | Integrated petroleum operations                     | Newman Bros. Drilling Co. (TX)         | NA   | Lease acquisition    | NA                  | 6-87                |
| <b>Claremont Petroleum N.L.</b> (Australia) Claremont Petroleum, (USA) Pty. Ltd. | Oil and gas exploration and development             | Woodbine Petroleum Inc. (TX)           | Oil and gas exploration and production           | Equity acquisition   | NA                  | 12-87               |
| <b>Cornwall Petroleum Corp., N.L.</b> (Australia)                                | Oil and gas exploration and development             | HarCor Energy Inc. (CA)                | Oil and gas exploration and production           | Equity acquisition   | NA                  | 7-87                |
| <b>Lonrho PLC</b> (United Kingdom) Hondo Oil and Gas Co.                         | Oil and gas exploration and development             | Pauley Petroleum Inc. (CA)             | Oil and gas exploration and production           | Equity acquisition   | NA                  | 10-87               |
| <b>Minerals and Resources, Ltd.</b> (Bermuda) Adobe Resources Corp.              | Oil and gas exploration and development             | High Plains Oil Corp. (CO)             | Oil and gas exploration and production           | Equity acquisition   | NA                  | 5-87                |
| <b>Royal Bank of Canada</b> (Canada)   | Investment holdings, banking                        | DI Industries Inc. (TX)                | Oil and gas exploration and production           | Equity acquisition   | NA                  | 5-87                |

**Table A1. Completed Transactions by Size in the Petroleum Industry from January 1987 through December 1987 (Continued)**

| Acquiring Company   | Acquiring Company Activity              | Affected Company                 | Affected Company Activity               | Type of Transaction | Size of Transaction<br>(million dollars) | Date of Transaction |
|---|---|----------------------------------|---|---------------------|--|---------------------|
| Neste Oy (Finland)  | Finnish State Oil Company               | Union Texas Petroleum (TX)       | Oil and gas exploration and production  | Joint venture       | NA                                       | 10-87               |
| Texter S.A. (Switzerland)                                       | Investment holdings                     | Gold King Consolidated Inc. (CO) | Oil and gas drilling, field services    | Equity acquisition  | NA                                       | 8-87                |
| John Wood Group PLC (United Kingdom)<br>Wood Group U.S.A.       | Investment holdings                     | Pengo Industries Inc. (TX)       | Oil and gas field services              | Asset acquisition   | NA                                       | 8-87                |
| Grands Lacs-Cometra S.A. (Belgium)<br>American Grands Lacs Inc. | Oil and gas exploration and development | Valex Petroleum (CO)             | Oil and gas exploration and development | Equity acquisition  | NA                                       | 12-87               |
| Ente Nazionale Idrocarburi (Italy)<br>Agip Petroleum            | State Oil Company                       | Steuart Petroleum                | NA                                      | Equity acquisition  | NA                                       | NA                  |

NA = Not available.

Note: Transactions include acquisition of equity, acquisition of properties, joint ventures, and other combined activities. Dates of transaction may reflect a publication date rather than an actual transaction date.

Source: See last page of the Appendix.

**Table A2. Completed Transactions by Size in the Coal Industry from January 1987 through December 1987**

| Acquiring Company   | Acquiring Company Activity                            | Affected Company   | Affected Company Activity   | Type of Transaction  | Size of Transaction | Date of Transaction |
|---|---|--|---|----------------------|---------------------|---------------------|
|   |   |  |   |                      | (million dollars)   |                     |
| <b>Consolidated Gold Fields PLC</b><br>(United Kingdom)                   | Mining, investment holdings                           | Newmont Mining Company (NY)                                  | Mining, oil and gas exploration and production                              | Equity acquisition   | 1,600               | 9-87                |
| <b>Consolidated Gold Fields PLC</b><br>(United Kingdom)<br>Newmont Mining | Mining, oil and gas exploration and production        | Peabody Holding Company (W. VA)                              | Coal mining, holding company  | Equity acquisition   | 320                 | 1-87                |
| <b>Great Western Resources, Inc.</b><br>(Canada)                          | Oil and gas exploration and production                | Bow Valley Industries, Ltd. (CAN)                            | Mining, oil and gas exploration and production                              | Equity acquisition   | 141.4               | 2-87                |
| <b>Veba AG</b><br>(West Germany)<br>Veba Coal U.S.A. Inc.                 | Coal mining   | Westermoreland Coal Co. (PA)                                 | Coal mining   | Equity acquisition   | 28.1                | 11-87               |
| <b>Norcen Energy Resources Ltd.</b><br>(Canada)                           | Oil and gas exploration and development, minerals     | M. A. Hanna Co. (OH)   | Diversified, minerals, metals, coal, oil and gas exploration and production | Equity acquisition   | 22.1                | 10-87               |
| <b>Veba AG</b><br>(West Germany)<br>Criterion Coal Co.                    | Coal mining   | Coal reserves in Eastern Kentucky from Bethlehem Steel Corp. | Steel, investment holdings  | Property acquisition | 20                  | 7-87                |
| <b>Idemitsu Kosan Co. Ltd.</b><br>(Japan)                                 | Oil refining, oil and gas exploration and development | Rocky Mountain Energy Co. (AL)                               | Coal mining   | Joint venture        | NA                  | 3-87                |

NA = Not available.

Source: See last page of the Appendix.

# Sources

Sources used in compiling the information presented in Tables A1 and A2 include:

- *The Wall Street Journal*. Various issues for 1987 and 1988.
- *Business Week*. Various issues.
- Company financial reports: annual reports to stockholders, annual reports on Securities and Exchange Commission (SEC) Form 10-K, and filings on SEC Schedule 13-D.
- *Moody's International Manual*, 1987 and 1988. Moody's Investors Service, New York, NY.
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- *International Petroleum Finance*. Petroleum Analysts, Ltd., New York, NY, January 18, 1988.
- *Coal Age*. McGraw-Hill, Inc., New York, NY, 1987. Various issues.
- U.S. Securities and Exchange Commission, *SEC News Digest*, Washington, DC. Selected issues, 1987 and 1988.
- *Petroleum Outlook*. John S. Herold, Inc. Greenwich, CT, March, 1988.
- *Predicasts FS Index of Corporate Change*, 1987. Predicasts, Inc., Cleveland, OH.
- U.S. Department of Commerce, International Trade Administration, *1987 Foreign Investments* (Final Printout), Washington, DC.
- *Mergers and Corporate Policy: The Cambridge Report on Corporate Policy*. Cambridge Corporation. Ipswich, MA. 1987 and 1988.
- *Petroleum Supply Annual 1987*. Energy Information Administration, Washington, DC.

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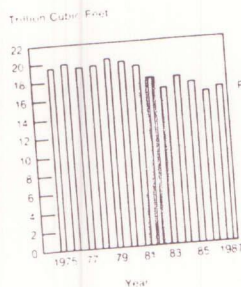
A quick reference to U.S. and international oil, gas, coal, electricity, and nuclear energy data.

## U.S. Natural Gas Consumption (Trillion Cubic Feet)

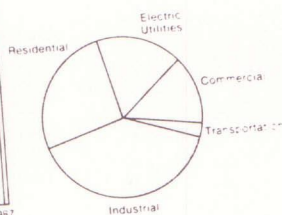
| Year  | Residential | Commercial | Industrial | Electric Utilities | Transportation | Total |
|-------|-------------|------------|------------|--------------------|----------------|-------|
| 1975  | 4.92        | 2.51       | 8.36       | 3.16               | 0.58           | 19.54 |
| 1976  | 5.05        | 2.67       | 8.60       | 3.08               | .55            | 19.95 |
| 1977  | 4.82        | 2.50       | 8.47       | 3.19               | .53            | 19.52 |
| 1978  | 4.90        | 2.60       | 8.40       | 3.19               | .60            | 19.63 |
| 1979  | 4.97        | 2.78       | 8.40       | 3.49               | .63            | 19.88 |
| 1980  | 4.75        | 2.67       | 8.20       | 3.68               | .64            | 19.40 |
| 1981  | 4.55        | 2.52       | 8.06       | 3.64               | .64            | 18.00 |
| 1982  | 4.63        | 2.68       | 6.34       | 3.23               | .49            | 16.83 |
| 1983  | 4.38        | 2.43       | 6.62       | 2.91               | .53            | 17.95 |
| 1984  | 4.56        | 2.50       | 7.23       | 3.11               | .50            | 17.28 |
| 1985  | 4.43        | 2.43       | 6.87       | 3.04               | .49            | 16.22 |
| 1986  | 4.31        | 2.30       | 6.50       | 2.84               | .50            | 16.68 |
| 1987P | 4.37        | 2.28       | 6.68       |                    |                |       |

P = Preliminary data.  
Note: "Total" may not equal sum of components due to independent rounding.  
Source: Energy Information Administration, Annual Energy Review 1987.

## Total Consumption

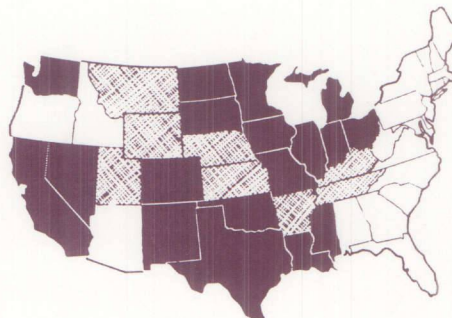


## 1987 Consumption



24

## Average Price of Natural Gas to Residential Consumers in 1986 (Dollars per Thousand Cubic Feet)



U.S. Average \$5.83  
 \$3.89 to \$4.99  
 \$5.00 to \$5.99  
 \$6.00 to \$6.99  
 \$7.00 to \$7.99  
 \$8.00 to \$8.83

Source: Energy Information Administration, Natural Gas Annual 1986

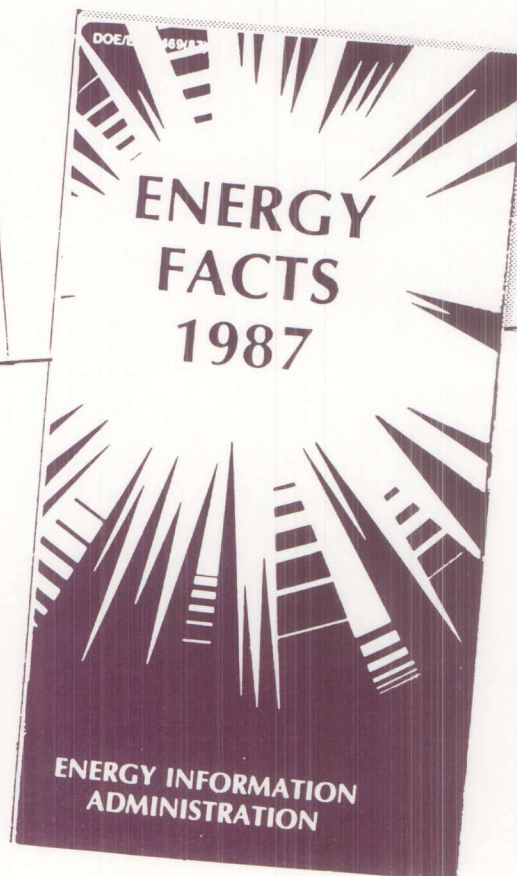
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